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REFERENCE

JUNE 30, 1962
Volume 7 Number 12

SCIENCE

TECHNICAL TRANSLATIONS

Serial Dept.
JUL 1) 1962

U.S. DEPARTMENT OF COMMERCE
BUSINESS AND DEFENSE SERVICES ADMINISTRATION
OFFICE OF TECHNICAL SERVICES
WASHINGTON 25, D. C.

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
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Use of funds for printing this publication approved by the Director of the Bureau of the Budget, November 22, 1961

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Volume 7, Number 12 | Pages 959 - 1061 | June 30, 1962

*Descriptors marked with an asterisk are included in the subject index.

BIBLIOGRAPHY

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS.
May 62, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

Letavet, A. A. and Medved', L. I.
BASIC PROBLEMS OF LABOR HYGIENE IN AGRICULTURE. [1961] 2p.
Order from OTS or SLA $1.10 62-15306

Trans. of Gigiena i Sanitariya (USSR) 1954 [v. 19] no. 6, p. 10.

DESCRIPTORS: *Agriculture, Labor, Medical personnel.

Shubin, G. P.
AVIATION-CHEMICAL METHOD OF EXTERMINATING THE RED-CHEEKED MARMOT. 24 Jan 62 [5]p. JPRS: 12155.
Order from OTS or SLA $1.10 62-15471

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1961 [v. 6] no. 3, p. 10-11.

Portions of this report will not reproduce well.

DESCRIPTORS: *Pest control, *Rodents, Poisons, *Airships, Distribution.

Ventskevich, G. Z.
AGROMETEOROLOGY. 1961, 300p. 67 refs. PL-480 Agr.
Order from OTS $3.00 60-51044

Trans. of mono. Agrometeorologiya, Leningrad, 1958, [376p.].

DESCRIPTORS: *Agriculture, Meteorology, *Plants, *Climatic factors, Soils, Humidity, Moisture, Weather stations, Snow, Wind, Grasses, Tobacco, Vegetables, Fruits, Diseases, Freezing, Forestry, Weather forecasting, Climate

This book deals with problems of agrometeorology, the characteristics of field climate, the significance of weather in agricultural production, the influence of the soil moisture cycle and of moisture reserves on the life of cultivated plants, as well as harmful weather phenomena and measures for combatting them. Sections on the significance of climate and weather in animal husbandry and on the servicing of agriculture through agrometeorology are included. This book is intended to serve as a textbook for hydrometeorological technical schools and various agricultural training institutions, but it can also be used by a wide circle of practicians in the field of agriculture. (Soviet publisher's note)

Animal Husbandry

ON VARIOUS DISEASES IN FARM ANIMALS.
29 Jan 62 [14]p. JPRS: 12295.
Order from OTS or SLA $1.60 62-15789

Trans. of Veterinariya (USSR) 1961, v. 38, no. 7, p. 42-44, 78-79, 95-96.

Portions of this report will not reproduce well.

DESCRIPTORS: *Foot-and-mouth disease, Swine, *Anthrax, Disinfectants, Spores, Conferences, *Protozoa, Animals, *Disease carriers, Man.

Contents:
Certain characteristics of foot-and-mouth disease in hogs, by N. A. Aleksandrov and others
Disinfecting environment from anthrax spores, by S. D. Belokhvostov and others
Seminar on hog diseases, by G. F. Epifanov
Jubilee scientific conference, by D. G. Vardosanidze
Conference on problems of protozoology, by A. A. Aliverdiev
Conference on combatting zoonotic diseases, by P. K. Gul'ev.

Genev, Khr., Popov, At., and Popkhristov, Ant.
HOG CHOLERA. 12 June 61 [53]p. JPRS: 9460
Order from OTS or SLA $5.60 62-19461

Trans. of mono. Bolesti po Svinete (Hog Diseases) Sofia, 1959, p. 5-54.

DESCRIPTORS: *Hog cholera, *Etiology, *Epidemiology, Viruses, *Immunity, Decontamination, Veterinary medicine.

Klimov, N. M. and Malakhov, A. G.
PURIFICATION OF THE FOOT-AND-MOUTH VIRUS BY THE ELECTROPHORETIC METHOD (Ochistka Virusa Yashchura Metodom Elektroforeza). 3 Nov 61, 9p. 1 ref. Trans. V-1742.
Order from OTS or SLA $1.10 62-13465

Trans. of Vsesoyuznyi Institut Eksperimental'noi Veterinarii. Trudy (USSR) 1959, v. 22, p. 189-194.

DESCRIPTORS: *Foot-and-mouth disease, *Virus diseases, Purification, Electrophoresis.

It was established that in order to preserve the biological properties of the foot-and-mouth virus it is necessary to carry out electrophoresis of virus-containing blood sera in a medinal-acetate buffer solution with a pH 7.6 at a temperature not exceeding 5°. In electrophoretic separation of virus-containing serum proteins, the foot-and-mouth disease virus migrates together with alpha-and beta-globulin fractions of blood sera, preponderantly with beta-globulins. By using the method of electrophoresis it is possible to obtain preparations of the foot-and-mouth virus that have been purified from ballast proteins of blood sera. (Author)

Shaburov, M. S.
INOCULATION OF CATTLE AGAINST FOOT-AND-MOUTH DISEASE WITH VIRULENT SERUM (K Voprosu o Privivkakh Skota Protiv Yashchura Virulentnoi Syvorotkoi). 27 Sep 61, 10p. Trans. V-1734.
Order from OTS or SLA $1.10 62-13477

Trans. of Vsesoyuznyi Institut Eksperimental'noi Veterinarii. Trudy (USSR) 1959, v. 22, p. 120-125.

DESCRIPTORS: *Foot-and-mouth disease, Cattle, Virus diseases, Serum, Veterinary medicine,

The blood serum of animals sick with FMD in its febril stage (when temperature is 40° or higher) contains FMD virus. Injection of 0.2 ml of virulent FMD blood serum into the mucous membrane of the upper lip by the Makkaveev method produces FMD in cattle. The severity of FMD in animals inoculated with the injection of virulent FMD blood serum into the mucous membrane of the upper lip did not differ from FMD of animals infected with the disease under natural conditions. The animlas simultaneously inoculated with virulent FMD blood serum into the mucous membrane of the upper lip and subcutaneous injection of the anti-FMD serum taken from convalescent animals, do not contract the disease; only in separate cases animals inoculated with simultaneous anti-FMD have developed primary aphate at the place of the virus-serum injection. The simultaneous anti-FMD inoculation of animals with virus-serum and anti-FMD serum of convalescent animals produces active immunity in these animals. (Author)

Plant Cultivation

CHEMICAL PREPARATIONS PRODUCED IN 1961 AND RECOMMENDED FOR PLANT PROTECTION.
24 Jan 62 [5]p. JPRS: 12152
Order from OTS or SLA $1.10 62-15668

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1961 [v. 6] no. 3, p. 46.

DESCRIPTORS: *Plants, Pest control, Insecticides, Acaricides, Fungicides, Herbicides

CONFERENCES AND STUDIES ON SOVIET PLANT DISEASES AND PEST CONTROL. 11 Jan 62 [18]p. JPRS: 11965.
Order from OTS or SLA $1.60 62-15481

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1960 [v. 5] no. 12, p. 49-55.

DESCRIPTORS: *Pest control, Conferences, *Plants, Forestry, Insect control, Herbicides.

Contents:
State Commission on Chemical Means of Pest Control
Seminar on forest protection, by A. I. Komyagin
Congerence on plant protection in Tallin, by M. V. Gorlenko
Section of Biological Methods of Pest Control at the International Entomological Congress (no. 11) by B. I. Poltev
New Department of Plant Protection at Velikie Luki Agricultural Institute, by A. K. Ermolaev
25th Anniversary of the Slavyansk Base of Vizr.

MACHINES FOR PLANT PROTECTION, MASS-PRODUCED IN 1961. 24 Jan 62 [4]p. JPRS: 12306.
Order from OTS or SLA $1.10 62-15778

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1961 [v. 6] no. 3, p. 47.

DESCRIPTORS: *Pest control, *Plants, Machines, Aerosol generators, *Agricultural machinery, Agriculture.

PHYTOTRON (Fitotron). 22 Sep 61, 8p. JPRS: 10289.
Order from OTS $0.50 61-31625

Trans. of Yunyi Tekhnik (USSR) 1961 [v. 6] no. 2, p. 37-41.

DESCRIPTORS: *Plants, Climatic factors, Physiology.

See also 60-17636, 61-19749.

SPRAYERS AND DUSTERS: PRIMARY PRODUCTION AT THE L'VOVSELMOSH PLANT. 17 Jan 62 [7]p. JPRS: 12211.
Order from OTS or SLA $1.10 62-15475

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1960 [v. 5] no. 6, p. 55-57.
Another trans. is available from LC or SLA mi$2.40, ph$3.30, as 61-13779, 31 Oct 60, 11p.

DESCRIPTORS: *Conferences, *Plants, Agriculture *Pest control, Machines, Spray tanks, Agricultural machinery.

Andreev, S. V.
BIOPHYSICS IN PLANT PROTECTION [Biofizika v Zashchite Rastenii]. 6 Nov 61 [9]p. JPRS: 11009.
Order from OTS or SLA $1.10 62-13434

Trans. of Zaschita Rastenii ot Vreditelei i Boleznei (USSR) 1960 [v. 5] no. 10, p. 18-21.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 61-15830, 6 Jan 61, 9p.

Portions of this report will not reproduce well.

DESCRIPTORS: *Biophysics, *Plants, Diseases, *Pest control, Agriculture, Scientific research.

Ch'en, Yu-p'ing, Chia, Chih-san, and T'ien, Sheng-kao.
THE CONCLUSION OF THE PRELIMINARY EXPERIMENT ON THE APPLICATION OF ORGANIC AND INORGANIC MIXTURE FERTILIZER ON RICE IN SZECHWAN. 31 Oct 61 [18]p. JPRS: 10973.
Order from OTS or SLA $1.60 62-13359

Trans. of T'u Jang Hsüeh Pao (Chinese People's Republic) 1956, v. 4, no. 2 [p. 169-176].

DESCRIPTORS: *Fertilizers, *Organic materials, *Rice, Growth.

Ciric, M.
PRIMARY PARTICLES IN THE PODZOLIC SOILS (Primarne Cestice u Podzolastim Zemljistima) tr. by Dusan Glumac. 1962, 15p. 13 refs. PL-480 Agr.
Order from OTS $0.50 60-21676

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1952, v. 5, no. 7, p. 104-117.

DESCRIPTORS: *Soils, *Yugoslavia, Particles, Colloids, Physical properties, Chemical properties, Fertility.

The contents of primary particles in some Yugoslav types of soils show that the relation of primary particles depends on the pedogenetic process and that it is a considerably sensitive indicator of the degree of the destruction of soil. In the south of Yugoslavia the podzolic soils differ considerably from the classic podzols in Nothern Europe. With Yugoslav podzols the A_2 horizon is richer in primary particles than the A_1 horizon and it is regularly richer in colloidal fractions, and often in the amount of adsorbic bases from the A_1 horizon. Such characteristics are the consequences of the gradual process of the intensification of the podzol formation in the southern parts of Yugoslavia. The fertility of soils stands in direct relation to the content of primary particles from the first group, and in some way the surface layer of the primary particles of the first group should be enriched. To a certain extent this may be achieved by mixing the A_1 horizon with the soil from the B horizon, or, as is done in our part of Yugoslavia, the soil from the A_2 horizon. (Author)

Endemann, W.
THE BEHAVIOR OF SHADE-TENT TOBACCOS DURING DRYING. 1962, 10p.
Order from K-H $12.50 K-H 6445-b

Trans. of Institut für Tabakforschung. Berichte (East Germany) 1955, v. 2, no. 1, p. 23-29.

DESCRIPTORS: *Tobacco, Dehydration, Processing.

Enders, C. and Glawe, R.
NICOTINE DECOMPOSITION IN THE TOBACCO LEAF. 1962, 21p.
Order from K-H $26.25 K-H 3923-c

Trans. of Biochem[ische] Zeit[schrift] (Germany) 1942, v. 312, p. 277-288.

DESCRIPTORS: *Tobacco, *Nicotine, Decomposition, Plants.

Favreau, P.
SOME ASPECTS OF TOBACCO FERTILIZING. 1962, 4p.
Order from K-H $5.00 K-H 11411-a

Trans. of Revue Internationale des Produits Tropicaux et du Materiel Tropical (France) 1960, v. 35, no. 372, p. 111 and 191.

DESCRIPTORS: *Tobacco, Plants, *Fertilizers.

Fetvadzhiev, Vladimir.
A COMBINATION FERMENTATION METHOD. 1962, 5p.
Order from K-H $6.25 K-H 11499-b

Trans. of Bulgar[ski] Tyutyun, 1959, v. 4, p. 500-503.

DESCRIPTORS: *Tobacco, Aging.

Fetvadzhiev, Vladimir.
THE CURING OF VIRGINIA TOBACCO. 1962, 7p.
Order from K-H $8.75 K-H 11499-c

Trans. of Bulgar[ski] Tyutyun, 1959, v. 4, p. 454-457.

DESCRIPTORS: *Tobacco, *Aging, Virginia

Fukarek, P.
SOME OLDER AND NEWER TREATISES ON PANCIC'S SERBIAN SPRUCE (Neke Starije i Novije Rasprave o Pancicevoj Omorici) tr. by Mladen Pantelic. 1962, 14p. 10 refs. PL-480 Agr.
Order from OTS $0.50 60-21637

Trans. of Sumarstvo (Yugoslavia) 1957, v. 10, no. 3/4, p. 245-257.

DESCRIPTORS: *Spruce, *Trees, Ecology, Growth, Regeneration, Insects, Parasites

A review of 10 articles published between 1890 and 1932 in scarce European periodicals.

Gilyarov, M. S.
WORK OF THE SECTION OF GENERAL ENTOMOLOGY. 17 Jan 62 [6]p. JPRS: 12212.
Order from OTS or SLA $1.10 62-15666

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1960 [v. 5] no. 6, p. 54-55.

DESCRIPTORS: *Insects, Pest control, Diseases, Plants, Soils.

Hu, Ch-sheng, Chen, Shu-yun and others.
CULTIVATION OF THE PEANUT ROOT NODULE BACTERIA AND ITS EFFECT ON THE FRUIT YIELD INCREASE. 29 Dec 61 [20]p. 25 refs. JPRS: 11794.
Order from OTS or SLA $1.60 62-15379

Trans. of T'u Jang Hsüeh Pao (Chinese People's Republic) 1956, v. 4, no. 2, p. 185-195.

DESCRIPTORS: *Plants, *Bacteria, Seeds, *Ecology, Growth, Nitrogen, Soils, Production

Data are summarized concerning the production and application of peanut root nodule bacteria culture, the effort made to raise the qualitative and quantitative standards of the culture by selecting the desirable strair by improving the method of cultivation and by setting the standard requirements for the finished product in the past six years.

Kosanovic, V.
A STUDY OF THE PRODUCTIVITY OF THE CHERNOZEM SOIL OF SOUTH BACKA (O Proizvodnim Sposobnostima Cernozema Juzne Backe) tr. by Danica Arandelovic. 1962 [23]p. 15 refs. PL-480 Agr.
Order from OTS $0.50 60-21621

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1954, v. 7, no. 18, p 1-20.

DESCRIPTORS: *Soils, *Plants, Growth, Fertility, Climatic factors, Moisture, Fertilizers, Temperature, Physical properties, Chemical properties, Microbiology, Corn, Wheat, Beets, Production, *Agriculture, *Yugoslavia.

The soil of the eastern part of South Backa (Vojvodina) belongs to the chernozem type developed on loess terraces. It is one of the most fertile soils. The naturally great productive capacity of this soil type makes it suitable for more intensive agricultural production. The present average yields of the main agricultural crops are much lower than they should be in relation to the favorable physical, chemical, and biological properties of chernozem. The yields of these crops in the last 50 years have declined. This condition in agricultural production occurred as a consequence of long-term use of monoculture, and the application of one-sided rotation of crops, viz. wheat-corn. This method of using the land leads to a decrease of the humus content in the soil, damages the structure of the soil and other physical properties, and causes an exhaustion of the readily available nutrients. Pastures, not yet cultivated, have shown 8 to 9% of humus, while cultivated soils show 4 to 6% and sometimes even less. Because of the danger of a gradual increase of the concentration of injurious salts, it is necessary to avoid great use of Na NO_3 and KCl in this soil. As a nitrogen fertilizer (NH_4 NO_3 plus $CaCO_3$) and $(NH_4)_2$ SO_4 should be used for these will regulate the reaction of the soil in addition to their other functions.

Matolchi, D., Gereg, L., and Veg, A.
ON THE PROBLEM OF OBTAINING BIS-2, 4-ETHYLAMINO-6-CHLORO-SYMTRIAZINE, tr. by J. B. 25 Jan 62, 5p. 6 refs.
Order from OTS or SLA $1.10 62-15762

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1960, v. 33, p. 1224-1226.

DESCRIPTORS: *Herbicides, Plants, Ethyl radicals, Chlorides, *Triazines.

A high yield of bis-2, 4-ethylamino-6-chloro-sym.-triazine can be obtained by performing the reaction in water medium at temperature between 0 and 50° C. (Author)

Neugebauer, V.
CONTRIBUTION TO THE KNOWLEDGE OF THE GENESIS OF ALKALI SOILS IN VOJVODINA (Doprinos Poznavanju Geneze Alkalnih Zemljista u Vojvodini) tr. by Danica Arandelovic. 1962, 15p. 20 refs. PL-480 Agr.
Order from OTS $0.50 60-21618

Trans. from Matica Srpska, Novi Sad. Zbornik [za Prirodne Nauke] (Yugoslavia) 1954, no. 5.

DESCRIPTORS: *Soils, Salinity, Genetics, Climate factors, Moisture, *Yugoslavia.

Discussions are presented on (1) the origin of salts in alkali soils, (2) the main factors of the formation of salinized soils and the ways of salinization, and (3) the genesis of alkali soils in Vojvodina.

Popov, V. E.
UNSOLVED PROBLEMS OF CORN SEED-BREEDING (AS A MATTER OF DISCUSSION) (Nereshennye Voprosy Semenovodstva Kukuruzy (v Poryadke Obsuzhdeniya)). 17 Nov 61, 7p. Trans. A-1315.
Order from OTS or SLA $1.10 62-13505
Trans. of Kukuruza (USSR) 1961, v. 6, no. 6, p. 42-43.
DESCRIPTORS: *Corn, *Seeds, Genetics.

Popovic, Z.
THE FIXATION OF PHOSPHORIC ACID IN THE PRINCIPAL TYPES OF SOIL IN SERBIA (Vezivanje Fosforne Kiseline u Glavnim Tipovima Zemljista Srbije) tr. by Bozidar Filipovic. 1962 [43]p. 193 refs. PL-480 Agr.
Order from OTS $0.50 60-21700

Trans. of Zemljiste i Biljka (Yugoslavia) [1956] v. 5, no. 1/3, p. 1-49.

DESCRIPTORS: *Soils, *Yugoslavia, Fertilizers, Physical properties, Chemical properties, *Phosphoric acids, Solubility, Calcium compounds, Phosphates, Penetration.

The P_2O_5 fixation was investigated in 5 chernozem soils, 5 smonitza soils, 7 brown forest soils, 5 podzol soils and 2 mineral swampy soils. Phosphoric acid was added to 100 g. of soil in 2.5, 10, and 25 mg of P_2O_5 in 100 ccm of solutions. After shaking, the bottles were left to stand 1.7 and 15 days. The filtered solutions were analysed for P_2O_5 by the colorimetric procedure. The treated soil was determined for the available P_2O_5 by the calcium lactate method. Some samples were held under paraffin oil in order to establish the reduction conditions. The movement of P_2O_5 through the soil was measured with radioactive phosphorus. The content of soluble P_2O_5 in the calcium lactate solution has the dominant effect in fixing the phosphoric acid. The same type of soil behaves differently if the phosphoric acid content is not the same. All soil samples with a high content of phosphoric acid fixed the added phosphoric acid in small amounts, and the fixed phosphoric acid was readily soluble. Different soil types with the same amount of available phosphoric acid fixed approximately the same amounts of phosphoric acid. The deeper soil layers fixed more phosphoric acid, except when these layers contained more soluble phosphoric acid than on the surface of the soil. The movement of phosphates through the soil is not deeper than 3 cm.

Ptitsyna, N. V. and Durdina, O. A.
COPPER NAPHTHENATE PASTE: SUBSTITUTE FOR BORDEAUX MIXTURE. 24 Jan 62 [6]p. JPRS: 12153.
Order from OTS or SLA $1.10 62-15470
Trans. of Zaschita Rastenii ot Vreditelei i Boleznei (USSR) 1961 [v. 6] no. 3, p. 36-38.

Portions of this report will not reproduce well.

DESCRIPTORS: Substitutes, *Fungicides, *Plants, Mildew, Copper compounds.

Not falling below Bordeaux mixture in effectiveness, the substitute has a substantial advantage in that the consumption of blue vitriol is decreased to 1/7 or 1/10 of that used for the former.

Sadykov, S. S.
THE PLANT HEREDITY CONTROL LABORATORY AND ITS PROBLEMS. 11 Jan 62 [9]p. JPRS: 11927.
Order from OTS or SLA $1.10 62-15486

Trans. of [Uzbekskii Biologicheskii Zhurnal] (USSR) 1961, no. 2, p. 3-6.

DESCRIPTORS: *Plants, *Genetics, *Cotton, Growth.

The laboratory is investigating the effect of external factors on the variability and formation of the hereditary characteristics of plants, mainly cotton, and is searching for ways of increasing their early ripening and yield capacity by means of directed influence on these characteristics. Not only morphogenetic methods of investigation, but also cytology, embryology, physiology, biochemistry and biophysics have been applied. Studies included: (1) the effect of basic factors of the environment on growth and development of cotton. (2) the influence of lowered temperature in the initial phases of development of cotton on the variation of early ripening by lowering its liking of heat, (3) the relation between early ripening and yield capacity of cotton with the length of the day and the quality of light, (4) the strengthening in the breed of newly acquired characteristics of lesser liking of heat in the initial phases of development and the great adaptability of cotton to lengthened daylight, and (5) the heredity and variability of early ripening and yield capacity for sexual and vegetative hybridization.

Stojanovic, R. and Popovic, Z.
A CONTRIBUTION TO THE INVESTIGATION OF THE CALCIUM CYANAMIDE EFFECT ON THE RED CLOVER GERMINATION AND THE DEVELOPMENT OF HORSE THISTLE (Prilog Proucavanju Uticaja Kalcium Cijanamida na Klijavost Crvene Deteline i Razvice Palamide) tr. by Dusan Glumac. 1961, 5p. 2 refs. PL-480 Agr.
Order from OTS $0.50 60-21695

Trans. of Arhiv za Poljoprivredne Nauke [i Tehniku] (Yugoslavia) 1951, v. 4, no. 6, p. 176-179.

DESCRIPTORS: *Plants, *Wheat, *Fertilizers, Calcium compounds, *Cyanamides, Phosphates, Potassium compounds, Growth, Inhibition.

Red clover was planted in an experimental plot of smonitza type of soil to determine the effect of calcium cyanamide on the yield of winter wheat. The soil was fertilized with calcium cyanamide and phosphate and potassium fertilizers in November, 1949, several days before the wheat was planted in quantities of 400, 500 and 700 kg per hectare. The red clover was planted into the winter wheat in March 1950. The terrain on which the experiments were carried out had been infested to a considerable extent by horse thistle. In comparison with check plots, all the plots fertilized with calcium cyanamide showed a considerable decrease of red clover germination and of horse thistle. The germination of red clover fertilized with the quantity of 400 kg of calcium cyanamide per hectare amounted only to 16.3 per cent; with quantities of 500 and 700 kg the percentage was 16.3, 13, respectively. At the same time calcium cyanamide caused a reduction of the number of the horse thistle stalks. In comparison with check plots, their number was decreased to 44.4 per cent when fertilized with a quantity of 400 kg, and to 16.3 and 18.4 per cent, respectively, when treated with 500 and 700 kg, respectively. (Author)

Usmanov, Kh. U., Yakubov, A. M. and others.
EFFECT OF PRE-PLANTING IRRADIATION OF COTTON SEED BY GAMMA-RAYS OF COBALT-60 ON THE ACCUMULATION AND CHEMICAL COMPOSITION OF COTTONSEED OIL. 30 Jan 62 [11]p. 6 refs. JPRS: 12305.
Order from OTS or SLA $1.60 62-15780

Trans. of Uzbekskii Khimicheskii Zhurnal (USSR) 1961, no. 3, p. 45-50.

Portions of this report will not reproduce well.

DESCRIPTORS: *Seeds, *Radiation effects, Gamma rays, Cobalt, Radioactive isotopes, *Cottonseed oil, Cotton.

Pre-planting irradiation of seed by gamma-rays increased the accumulation of seed oil in the cotton bolls. The greatest accumulation occurred at the second-third and at the fifth-sixth sympodial branches. Oil accumulation in the cotton seed depends on the dosages of the pre-planting irradiation of the seed. The optimal dosage can be taken at 6000-8000 r; at this value, the seed oil content, as a result of separate experiments, reaches a value of 3.21% at the second-third sympodial branches in comparison with the control. The chemical composition and the edible value of oil from cotton seed subjected to pre-planting gamma-irradiation using cobalt-60 at dosages of up to 15000 r practically is unchanged. In the irradiation of cotton plant seed before planting, in seeds possessing high reactivity and the requisite energies for initiating chain reactions, evidently there are formed long-lived free radicals from the radiolysis of water, proteins, and other substances, which is the most probable mechanism for seed growth. Taking into account the positive result of our previous studies with irradiation, indicating an increase in harvest potential of raw cotton, we recommend for introduction into production of pre-planting irradiation of seed using gamma rays of cobalt-60 in limits of dosages from 6000 to 10000 r. (Author)

Yu, T'ien-jen, Chou, Ch'i-k'un and others.
THE EFFECT OF SOIL SALT ON THE GROWTH AND COMPOSITION OF PASTURE GRASS. 30 Nov 61 [15]p. 16 refs. JPRS: 11357.
Order from OTS or SLA $1.60 62-15230

Trans. of T'u Jang Hsüeh Pao (Chinese People's Republic) 1956, v. 4, no. 2, p. 159-167.

DESCRIPTORS: *Soils, *Salts, *Plants, Growth, Grasses, Physiology.

The effect of soil salt on the growth and composition of different species of pasture grass was compared by tests carried out in pots. Among the Legmminosae, Pisum and Trifolium are the most susceptible to the toxic effects of soil salts, while Melislotus Juss and Medicago denticulata are more tolerant. Among Gramineae, Bromus japonicas and Hemerocallis flava are more tolerant, while Hemerocallis minor and Pteris sorrlata are more susceptible to toxic effects. All species are most susceptible to the toxic effects of salts during their early growth stage. Species of the Gramineae are more susceptible to such effects than those of Legmminosae. Differences in susceptibility of the species of the latter at different growth stages are gradual. The higher the soil salt content, the lower are the Ca and Mg content of species of Gramineae. Species of Legmminosae show no marked decrease. Cl and S content of the various species increases as their concentration in the soil is increased. Absorption of P and K is not influenced by the soil salt content. The earlier the salts are introduced the higher is the plant water content.

Zabaznyi, P. A.
FIVE YEARS OF A NEW SYSTEM OF SEED BREEDING (5 Let Novoi Sistemy Semenovodstva). 17 Nov 61, 15p. Trans. A-1314.
Order from OTS or SLA $1.60 62-13504

Trans. of Kukuruza (USSR) 1961, v. 6, no. 6, p. 37-40.

DESCRIPTORS: *Seeds, *Genetics, Corn, Animal industry.

A change to planting of hybrid seed by a checkrow method with a mechanized cultivation and a combine harvesting of the yield shortened the labor expenditure for the cultivation of this crop, raised its yielding capacity and made it a leading crop in the formation of a stable feed base for the animal industry.

Zaslavskii, A. I., Sinani, S. S., and Sokolova, L. A.
HET WINNEN VAN KALIUMSULFAATHOUDENDE KUNSTMESTEN UIT KALIUMCHLORIDE EN MIRABILIET (Production of Potassium Sulfate Fertilizers from Potassium Chloride and Mirabilite) 55p. (foreign text included). 11 refs. MTWL: 371. (text in Dutch).
Order from OTS or ETC $2.95 61-32034

Trans. of Akademiya Nauk SSSR. [Otdelenie Khimicheskikh Nauk]. Izvestiya, 1938, no. 1, p. 47-68.

DESCRIPTORS: *Potassium compounds, Sulfates, *Fertilizers, Chlorides, Phase studies.

Znamenskii, V. S.
CURRENT STATE AND TASKS OF FOREST PROTECTION. 17 Jan 62 [5]p. JPRS: 12209.
Order from OTS or SLA $1.10 62-15677

Trans. of Zashchita Rastenii ot Vreditelei i Boleznei (USSR) 1960 [v. 5] no. 6, p. 58-59.

DESCRIPTORS: *Plants, *Trees, *Forestry, Diseases, *Pest control.

ASTRONOMY

Astrophysics

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 18 for Oct 61 on AID Work Assignment no. 3. 31 Oct 61 [41]p. 18 refs. AID rept. 61-147; AD-267927
Order from OTS or SLA $4.60 62-13765

DESCRIPTORS: *Astrophysics, Geophysics, Bibliography, *Upper atmosphere, Ionosphere, Literature, Solar energy, Van Allen radiation belt, Cosmic rays, Satellite vehicles, Guided missiles, Meteorological data.

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 19 for Nov 61 on AID Work Assignment no. 3. 30 Nov 61 [34]p. 20 refs. AID rept. 61-153; AD 267 929
Order from OTS or SLA $3.60 62-13761

DESCRIPTORS: *Upper atmosphere, Literature, *Geophysics, *Astrophysics, Bibliography, Meteorological data, Solar energy, Ionosphere, Van Allen radiation belt, Cosmic rays, Atmospheric electricity, Satellite vehicles, Guided missiles.

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 20 for Dec 61 on AID Work Assignment no. 3. 31 Dec 61 [23]p. 15 refs. AID rept. 61-169; AD-271 515.
Order from OTS or SLA $2.60 62-19114

DESCRIPTORS: *Sunspots, Hydrodynamics, Theory, Ionospheric disturbances, Solar flares, *Ionosphere, Ionization, Terrestrial magnetism, *Aurorae, Antarctic regions, Measurement, Radar, Photometers, Spectrographic analysis, *Earth, *Electric currents, Solar atmosphere, *Cosmic rays, *Atmospheric electricity, *Upper atmosphere.

PHENOMENA IN THE UPPER ATMOSPHERE: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 21 for Jan 62 on AID Work Assignment no. 3. 31 Jan 62 [21]p. 14 refs. AID rept. 62-6; AD-271 512.
Order from OTS or SLA $2.60 62-19109

DESCRIPTORS: *Ionosphere, Ionization, *Aurorae, Night sky, Luminescence, *Solar corona, Solar flares, Ploarization, Van Allen radiation belt, Cosmic rays, *Atmospheric electricity, *Plasma physics, *Upper atmosphere, Antarctic regions.

Kurchakov, A. V.
OPTICAL PROPERTIES OF THE ATMOSPHERE AND SURFACE OF THE PLANET MARS, tr. by M. G. Scott. [1962] 5p. 12 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of Lenigrad U. Vestnik (USSR) 1960 [v. 15] no. 7 [Seriya Matematiki, Mekhaniki i Astronomii, no. 2] p. 154-163.

DESCRIPTORS: Planets, *Mars, Planetary atmospheres, Atmosphere, Surfaces, Optics, Thickness, Scattering, Brightness, Absorption.

Syntinskaya, N. N.
PROBABLE DIMENSIONS OF MICROFEATURES OF THE LUNAR SURFACE. [1962] 2p. 8 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of [Akademiya Nauk SSSR. Komissiya po Fizike Planet. Izvestiya] 1959, no. 1, p. 81-84.

DESCRIPTORS: *Moon, Surface properties, Light, Reflection, Optics.

BEHAVIORAL SCIENCES

Personnel and Training

CONFERRAL OF ACADEMIC DEGREES IN NORTH KOREA. 22 June 61 [9]p. JPRS: 9495.
Order from OTS or SLA $1.10 62-19325

Trans. from Nodong Sinmun (North Korea) 1961, 22 Apr.

DESCRIPTORS: North Korea, *Instructors, Education, *Professional personnel.

INFORMATION ON POLISH SCIENTIFIC PERSONALITIES AND ACTIVITIES [SELECTED ARTICLES]. 19 Sep 61 [126]p. 36 refs. JPRS: 10153.
Order from OTS or SLA $10.10 62-19625

Trans. of Nauka Polska, 1960, v. 8, no. 4, p. 1-65, 167-169, 232-255, 276-284.

DESCRIPTORS: *Scientific personnel, Personnel, Physicists, Chemists, *Scientific research, Research program administration, Economics, Scientific organizations, Conferences, Embryology, *Poland.

Contents:
Polish scientific planning, by Janusz Groszkowski and Witold Nowacki
The status of scientific personnel in Poland, by Henryk Golanski
Poland: Science to be closely integrated with the national economy during period 1961-65, by Adam Wang
Biography of Polish Physicist Wojciech Rubinowicz, by Wojciech Krolikowski
Biography of Polish chemist Tadeusz Urbanski, by Juliusz Hackel and Barbara Serafinowa
The All-Union Embryology Congress in Moscow (no. 3) July 60, by Jozef Niwelinski
Regional scientific societies in Poland, by Waldemar Rolbiecki
The planning commission of the Polish Academy of Sciences, by Maciej Gorzechowski
Changes in names of Polish Scientific Institutions, by Maciej Gorzechowski

PSYCHOLOGICAL INVESTIGATIONS INTO THE PROCESSES OF LEARNING AND REACTING.
24 Oct 61 [34]p. 16 refs. JPRS: 10686.
Order from OTS or SLA $3.60 62-13266

Trans. of Akademiya Pedagogicheskikh Nauk RSFSR, 1960, no. 3, p. 79-85, 91-102, 121-124.

DESCRIPTORS: *Psychology, *Learning, *Reaction (Psychology), Auditory perception, Motor reactions, Vision, Tactual perception, Transfer of training, Children, Analyzers (Psychology), Excitation.

Contents:
Analysis of the systemic structure of perception: an attempt to replace the motor link in the system of pitch perception, rept. 9, by O. V. Ovchinnikova
Understanding a principle on the basis of the generalization of relations, rept. 2, by Dzh. Kristian
A comparative analysis of touch and vision: the visual Haptic transfer in pre-school children, rept. 3, by V. P. Zinchenko and A. G. Ruzskaya
A comparative analysis of touch and vision: the development of tactile orientation, and Haptic-visual transfer in pre-school children, rept. 4, by V. P. Zinchenko and A. G. Ruzskaya
The effect of monotonous work on the time of simple motor reaction and the liability of the excitation process in the visual analysor, by V. G. Aseev.

Antonova, M. M. and Pantyukhin, V. P.
A DEVICE FOR WARMING UP THE AIR INHALED BY LARYNGECTOMIZED PATIENTS, tr. by L. Summerfield. [1961] [4]p. (2 figs. omitted).
Order from OTS or SLA $1.10 62-13978

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 102-103.

DESCRIPTORS: *Larynx, Surgery, *Respiration, *Air, *Heating.

The warmer consists of a square prismatic box of dimensions 150 x 65 x 30 mm made of thin tinplate. The box has five walls, the sixth wall being formed by the outer aspect of the chest wall of the patient, against which the box is closely fastened. On the sides of the box there are two linear openings measuring 85 x 10 mm. The outer wall has a small concavity for collection of mucus and is lined on the inside with oil skin. The external walls of the box are covered with one or two layers of gauze. The air passing through the box during inspiration is cleaned and is warmed by the skin of the chest after which it enters the trachea.

Boiko, E. I., ed.
STUDIES IN HIGHER NEURODYNAMICS AS RELATED TO PROBLEMS OF PSYCHOLOGY, tr. by A. Ferber. Collection of Experimental Works. 1961, 257p. 186 refs. PL-480-HEW.
Order from OTS $2.75 60-21168

Trans. of mono. Voprosy Izucheniya Vysshei Neirodinamiki v Svyazi s Problemami Psikhologii, Moscow, 1957 [250p.].

DESCRIPTORS: *Psychology, *Neurology, Physiology, *Conditioned reflex, Reaction (Psychology), Stimulation, Verbal behavior, Inhibition, Visual perception, Cerebral cortex, Memory, Visual thresholds, Training, Electrical effects, Muscles, Motor reactions, Man, Automation.

Contents:
Reciprocity of conditioned reflex processes in complex systems reactions, by E. E. Boiko
Dynamics of nervous processes at the differentiation of direct and verbal stimuli in adults, by N. I. Chuprikova
Differentiation of complex stimuli with common components (to the problem of mechanisms of the associative inhibition) by M. M. Vlasova
On differences in latent periods of reactions at the differentiation of verbal stimuli according to semantic (logical) features, by N. M. Kostomarova
Peculiarities of the mental comparison of visual objects through perception and reproduction from memory, by N. M. Kostomarova
Changes in the excitability of various cortical points at mental comparison of visual objects, by M. M. Vlasova
Influence of repeating exercises upon the process of mental comparison, by N. I. Chuprikova
Influence of training conditions on the threshold of the visual recognition, by L. A. Shvarts
Changes in the electrical activity of muscles during the elaboration of motor differentiations in man, by A. Ya. Kolodnaya
Electrophysiological study of the elaboration of trace rhythmical reactions in man, by A. Ya. Kolodnaya
Dependence of the process of automation on the structure of exercised actions, by N. I. Krylov
The dependence of reaction times on the location of the stimulus in the field of vision, by T. N. Ushakova.

Dashkovskaya, V. S.
THE FIRST CONDITIONED REACTIONS IN NEWBORN INFANTS UNDER NORMAL AND IN CERTAIN PATHOLOGICAL CONDITIONS. [1961] [21]p. 18 refs.
Order from OTS or SLA $2.60 62-13773

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1953, v. 3, no. 2, p. 247-259.

DESCRIPTORS: *Infants, *Conditioned reflex, Motor reactions, Reaction (Psychology), *Auditory signals, Children

The development of distinct conditioned reaction to a bell in newborn babies is preceded by a stage in which there is cessation of all sorts of movement of the lips, mouth, turning of the head, etc., during each sounding of the bell. This cessation of movement apparently arises as a result of external (unconditioned) passive inhibition. In healthy newborn babies the first distinct conditioned reaction to sound in the form of sucking or blinking movements appear 7-9 days after birth. These reactions are characterized by extreme unreliability and instability, which indicates the weakness in the process of cortical

excitation in newborn babies, as a consequence of which passive inhibition appears easily. In infants who have undergone intracranial birth trauma the external inhibition due to auditory stimulation and the formation of associations appears later than in healthy babies. In some newborns who were traumatized during birth the applications of conditioned stimuli was associated with a "negative reaction" to the conditioned feeding stimulus (bell); they would press their lips together and refuse to suck, which indicates that this group of infants shows a phasic condition (of the ultra-paradoxical phase type).

Dmitriev, A. S. and Kochigina, A. M.
IMPORTANCE OF TIME AS STIMULUS OF CONDITIONED REFLEX ACTIVITY (Znachenie Vremeni kak Vozbuditelia Uslovnoreflektornoi Deyatel'nosti). [1961] [57]p. (4 figs. omitted) 57 refs. [NIH]-134.
Order from OTS or SLA $5.60 62-15103

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1955, v. 40, no. 1(4), p. 31-51.

DESCRIPTORS: *Conditioned reflex, *Reaction time.

Fadeeva, V. K.
THE PECULIARITIES OF THE INTERACTION BETWEEN THE FIRST AND SECOND SIGNALING SYSTEMS IN THE COURSE OF FORMATION OF CONDITIONED REFLEXES TO COMPLEX STIMULI IN CHILDREN. [1961] [22]p. 25 refs.
Order from OTS or SLA $2.60 62-13777

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1951 [v. 1] no. 3, p. 28-42.

DESCRIPTORS: *Auditory signals, *Conditioned reflex, *Children, *Infants, Reaction (Psychology)

The interrogation of children eight to ten years old, after the fixing of a conditioned motor reflex to a complex stimulus consisting of two components of different physiological intensity, shows that while several of the children gave a perfectly correct oral response regarding the stimuli applied in the experiment, their reactions, and the connection between these two elements, in the case of other children the conditioned connections formed under these conditions in the first signaling system do not receive a corresponding dynamic expression in the second signaling system. In the majority of cases, after the formation of the conditioned reflex to the complex stimulus, the children noted in their oral account only the connection between their motor reaction and the stronger of the two components and not that with the entire complex composed of the two stimuli. Subsequently the separate application, not only the strong component but also the weak one often caused the conditioned motor reaction. After the strengthening of the conditioned motor reaction to a weak stimulus separately applied, the children began to give a correct and complete oral account of this stimulus, the reaction to it, and the connection between these elements.

Kasatkin, N. I., Mirzoyants, N. S., and Khokhitva [G]. P.
ORIENTED CONDITIONED REFLEXES IN INFANTS DURING THE FIRST YEAR OF LIFE. [1961] [16]p. 13 refs.
Order from OTS or SLA $1.60 62-13787

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1953, v. 3, no. 2, p. 192-202.

DESCRIPTORS: *Infants, *Conditioned reflex, Age factors.

Experiments show that the process of conditioned orientation reflex formation starts in some children with a directing of the gaze in the direction from which the reinforcement usually appears, while a turning of the head in the same direction becomes associated with this reaction only at a later time. In other children the emergent conditioned reflex immediately manifests itself as a turning of the head. After reinforcement of the conditioned reflex this form of response predominates. In general, the older the child the more quickly did the conditioned reflex develop. On the basis of the orientation reflex present in newborn children in the form of a direction of the gaze and turning of the head towards the side of a light source, it is possible to develop a conditioned auditory reflex as early as the first months of life. An inconstant conditioned orientation reflex to sound may be formed for the first time at an age of about 2 1/2 months. By the fifth month of life the conditioned orientation reflex becomes satisfactorily constant, with a distinct effector response. At an age of 5-7 months a conditioned orientation reflex will develop in a child very rapidly after several associations.

Krotkin, I. I. and Suslova, M. M.
CHANGES IN CONDITIONED AND UNCONDITIONED REFLEXES DURING SUGGESTION STATES IN HYPNOSIS. [1961] 12p. 22 refs.
Order from OTS or SLA $1.60 62-15044

Trans. of Akademiya Nauk SSSR. Institut Fiziologii. Trudy, 1956, v. 5, p. 267-277.

DESCRIPTORS: *Hypnosis, *Conditioned reflex, Reaction (Psychology)

Suggestion in hypnosis of advanced old age, like the suggestion of deep sleep, leads to considerable diminution of the magnitude of the conditioned and unconditioned winking reflexes up to complete inhibition of them. An analogous result is produced by the suggestion of a state of lack of functional ability during hypnosis. Inhibition produced by suggestion of advanced old age, deep sleep, lack of functional ability, like any cortical inhibition, is subject to training and intensifies with repetition of the experiments. Suggestion of the earliest ages (1-2 years) produces a significant inhibition of conditioned reflex activity, but weaker than suggestion of advanced old age. Inhibition which develops after different verbal suggestions is apparently the result of a temporary weakening of the activity of the cerebral cortex produced by these verbal suggestions. Suggestion of alertness and functional ability entails not only a recovery but also a significant increase, compared with the normal, of the conditioned and unconditioned reflexes. The same thing occurs with the

suggestion of the actual age of the subject after a preliminary suggestion of advanced age. The increase mentioned of the conditioned and unconditioned reflexes is apparently the result of positive induction which arises following a comparatively intense cortical inhibition produced by the suggestion of advanced age or of lack of functional ability. The degree of change of the conditioned reflex activity in the presence of verbal suggestions in hypnosis can vary within certain limits depending on the functional state of the cerebral cortex.

Nikitina, G. M.
INTERRELATIONS IN THE DEVELOPMENT OF ORIENTATION REACTIONS AND CONDITIONED MOTOR REACTIONS IN ONTOGENESIS. [1961] [13]p. 18 refs.
Order from OTS or SLA $1.60 62-13783

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1954, v. 4, no. 3, p. 406-414.

DESCRIPTORS: *Conditioned reflex, *Reaction (Psychology), *Motor reactions, Animals, Nervous system, *Analysers (Psychology).

The orientation-type reaction is the first to appear in the process of ontogenesis (10th-15th day of life) in the formation of a conditioned defensive reflex in puppies. In its development this reaction goes through definite stages: (1) the stage of vague orientation reaction (2) the stage of pronounced orientation reaction, and (3) the stage of instability and extinction. The development of analogous stages in the orientation reaction to light in puppies takes place later than with the development of these reactions to sound (on the 10th-15th day) which is evidently connected with the slower process of the functional maturation of the visual analysor system. The extinction of the orientation reaction, connected with the development of the conditioned defensive motor reflex almost always coincides in time with the development of the stable conditioned reflex. The data indicate that in the process of ontogenesis puppies show characteristic interrelations in the development of the orientation and conditioned defensive reactions which apparently express the specific functional interactions of the cortical and subcortical areas at a given age.

Norkina, L. N.
THE PRODUCTION OF EXPERIMENTAL NEUROTIC STATES IN THE LOWER APES. [1961] [10]p. 7 refs.
Order from OTS or SLA $1.10 62-13782

Trans. of #Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1958, v. 8, no. 1, p. 56-63.

DESCRIPTORS: *Primates, *Psychoneuroses, Motor reactions.

The conventional methods of producing experimental neuroses as used in salivary method experiments on dogs were not very effective in motor method experiments on monkeys, and they demanded more complex trials or the use of several applications. Disturbances of the elaborated stereotype could lead to disturbance of the nervous equilibrium, mainly in the form of motor excitation and the appearance of neurotic reactions of a sluggish character. Differentiation of 2 movements, closely related in form but connected with different external signals, was quite difficult for the monkeys, and could lead to a marked neurotic state, either as intense over-excitation with the development of marked and persistent neurotic motor reactions or as a hypnotic state with sluggish forms of motor reflex. The most characteristic neurotic reactions in monkeys were stereotyped movements or general motor restlessness, aggression to self and surroundings in over-excitation, and scratching, pulling at the hair on the limbs, yawning, etc. in inhibition. The reactions often had the character of sluggish movements, not caused by any external factor, and this compels the assumption that subcortical mechanisms take part in their production (Author)

Sokolov, M.
PSYCHOLOGY. [1961] [5]p. 34 refs.
Order from OTS or SLA $1.10 62-15722

Trans. of Bol'shaya Sovetskaya Entsiklopediya. Yezhegodnik (USSR) 1958, p. 481-483.

DESCRIPTORS: *Psychology

Soviet achievements in psychology in 1957 are summarized.

BIOLOGICAL SCIENCES

BIOLOGICAL SCIENCE AND THE BUILDING OF COMMUNISM. 17 Jan 62 [7]p. JPRS: 12008.
Order from OTS or SLA $1.10 62-15483

Trans. of Zhurnal Obshchei Biologii (USSR) 1961 [v. 22] no. 5, p. 321-324.

DESCRIPTORS: *Biology, *Communism, Research program administration.

The task before Soviet biologists is clear: to learn to comprehend the fundamental secrets of nature more deeply, and to learn to control the processes of life, thus increasing man's dominion over nature and over himself. In fulfilling this task, our scientists have all the conditions, created by our people, in order to occupy in a short time the leading position in the world in all the decisive fields of biological science. (Extract)

BIOLOGY AND MEDICINE: A LIST OF RUSSIAN REVIEW PAPERS, comp. by Zelda D. Knowles. 1958 [33]p. 301 refs.
Order from OTS or SLA $3.60 62-15087

DESCRIPTORS: *Biology, *Medical research, *Bibliography.

LIFE SUPPORT SYSTEMS: SOVIET LITERATURE. Monthly rept. no. 6 for Sep 61 on AID Work Assignment no. 22. 27 Oct 61 [19]p. 11 refs. AID rept. 61-143; AD-267 926.
Order from OTS or SLA $1.60 62-13766

DESCRIPTORS: *Space medicine, *Closed cycle ecological systems, Space flight, Psychology, Physiology, Biology, Radiobiology, Metabolism, Instrumentation, *Literature.

Summary translations are presented of 11 Soviet papers published in 1961 on space medicine and biology.

LIFE SUPPORT SYSTEMS: SOVIET LITERATURE. Monthly rept. no. 7 for Oct/Nov 61 on AID Work Assignment no. 22. 20 Dec 61 [16]p. 5 refs. AID rept. 61-168; AD-271 514.
Order from OTS or SLA $1.60 62-19110

DESCRIPTORS: *Literature, *Space medicine, *Space flight, Biology, Radiobiology, Survival, Hyperthermia, Blood, Metabolism, Physiology.

Translations (possibly condensed) are presented of the following papers on space medicine and biology: (1) The effect of ionizing radiation on the nuclein metabolism in sex cells of males in connection with the development of either male or female offspring in their progeny, by V. N. Shreder; (2) Independence of the antiradiation effect of aminoethylisothiouronium·Br·HBr on the "oxygen effect", by E. Ya. Grayevskiy and M. M. Konstantinova; (3) The combined effect of total-body irradiation and temperature variations on the organism, by P. A. Milonov; and (4) Distribution of mercamine sulfur in organs and tissues of irradiated and nonirradiated animals, by S. Ya. Arbuzov et al.

PROGRESS OF MODERN BIOLOGY, 1961, VOL. 52, NO. 1(4): [SELECTED ARTICLES]. 21 Nov 61 [81]p. 312 refs. JPRS: 11221.
Order from OTS or SLA $8.10 62-13648

Trans. of #Uspekhi Sovremennoi Biologii (USSR) 1961, v. 52, no. 1(4), p. 19-78.

DESCRIPTORS: Scientific reports, Biology, Bibliography, *Antibodies, Antigens, *Enzymes, Inhibition, *Immunology, *Transplantation, *Blood forming organs, Bone marrow, *Radiation effects.

Contents:
Modern methods of isolating pure antibodies, by R. S. Nezlin
Antibody anti-enzymes, by I. V. Domaradskii
Radiation disturbances of immunity in the light of modern methods of immunity, by V. L. Troitskii
Transplantation of hemopoietic tissue irradiated animals, by E. A. Luriya.

STUDIES IN BIOLOGY. 14 Nov 61 [32]p. 55 refs. JPRS: 11094.
Order from OTS or SLA $3.60 62-13537

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1961, [v. 26] no. 4, p. 497-518.

DESCRIPTORS: *Cells (Biology), *Stimulation, Excitation, *Reaction (Psychology), Enzymes, *Molecular structure, *Nucleic acids, Infections, *Viruses, Peptides.

Contents:
The excitation of living cells as a shift of the steady state of open systems, by A. G. Pasynskii and G. D. Dechev
Macromolecular structure of native ribonucleic acid in a solution, by A. S. Spirin and L. P. Gavrilova.

SUMMARY OF THE CONFERENCE ACTIVITIES DEVOTED TO THE PHILOSOPHICAL PROBLEMS OF BIOLOGY AND FUTURE TASKS IN THE DEVELOPMENT OF PHILOSOPHICAL PROBLEMS OF BIOLOGY IN UKRAINE. 13 Nov 61 [9]p. JPRS: 11101.
Order from OTS or SLA $1.10 62-13528

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1961, no. 6, p. 825-829.

DESCRIPTORS: *Conferences, Scientific reports, *Biology, Philosophy.

Aleksandrova, V. D.
THE PLANT COMMUNITY IN THE LIGHT OF SOME CYBERNETIC IDEAS. 12 Jan 62 [23]p. 40 refs. JPRS: 11925.
Order from OTS or SLA $2.60 62-15382

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten' Otdel Biologicheskii (USSR) 1960, [v. 35(65)] no. 3, p. 101-113.

DESCRIPTORS: *Plants, *Ecology, *Biology, Physiology, Animals, Aging, Climatic factors, Food, Growth, *Cybernetics, Analysis.

The ideas and concepts of cybernetics reveal the positive and negative feedbacks within the system phytocoenosis-environment and show the mechanisms regulating the composition and number of populations comprising phytocoenosis. A quantitative expression of the rate of organization of the matter in phytocoenosis can be produced by calculating the amount of negative entropy and quantitative expressions of variety or information embodied in phytocoenosis can be estimated. The consideration enables us to consider phytocoenosis in the range of other material dynamic systems and to qualify it as a complex and very intricate system with stochastic transformations and statistic effects.

Barbashova, Z. I.
CELLULAR LEVEL OF ADAPTATION. 26 Jan 62 [62]p. 149 refs. JPRS: 12134.
Order from OTS or SLA $6.60 62-15468

Trans. of mono. (treatise) Kletochnyi Uroven' Adaptatsii, Leningrad, n. d., 42p.

DESCRIPTORS: *Cells (Biology), *Adjustment (Psychology), Ecology, Histology, *Oxygen, *Anoxia, Resistance, *Diseases, Tissues (Biology).

Contents:
Origin of the problem
Experimental analysis of the problem
The struggle for oxygen
Adaptation to hypoxia
Raising the non-specific resistance of cells and tissues.

Bolgarov, Nikolai.
CHLORELLA TO BE LAUNCHED INTO SPACE.
18 Jan 62 [5]p. FTD-TT-62-89; SC-992; ASTAR 2500; AD-271 844.
Order from OTS or SLA $1.10 62-19644

Unedited rough draft trans. from Sovetskaya Kirgiziya (USSR) 1961, 15 Nov.

DESCRIPTORS: *Algae, *Closed cycle ecological systems, Space capsules, Oxygen, Carbon dioxide, Nutrition, Space flight

A popular or nontechnical discussion is presented on the possibility of using Chlorella during space flights. The Chlorella can be used to absorb carbon dioxide and to evolve oxygen for the cosmonauts, to detoxicate human waste products and to produce from them water with good taste qualities, and to supply cosmonauts with high calorie food and vitamins.

Bykhovskii, M. L., Vishnevskii, A. A., and Kharnas, S. Sh.
PROBLEMS IN THE DEVELOPMENT OF A DIAGNOSTIC PROCESS BY MEANS OF MATHEMATICAL MACHINES. 4 Jan 62 [23]p. 3 refs. JPRS: 11814.
Order from OTS or SLA $2.60 62-15362

Trans. of Eksperimental'naya Khirurgiya i Anesteziologiya (USSR) 1961 [v. 6] no. 4, p. 3-15.

DESCRIPTORS: *Diagnosis, *Medicine, *Cybernetics, *Computers, Data processing systems, Mathematical prediction.

Eremeev, I. S.
THE BRAIN AND THE MACHINE (Mozok i Mashyna).
1 Dec 61 [10]p. JPRS: 11310.
Order from OTS or SLA $1.10 62-13639

Trans. of Nauka i Zhyttya (USSR) 1961, v. 11, no. 2, p. 41-44.

DESCRIPTORS: Brain, Machines, *Cybernetics, Computers.

There is a qualitative difference between the brain and even the best of machines. The brain, which is a product of natural evolution and is composed of living cells, works according to biochemical laws, while the machine acts pursuant to a pre-determined program, according to the laws of electrodynamics. (Author)

Eugster, C. H. and Karrer, P.
TARAXANTHIN AND TARACHROM AS WELL AS OBSERVATIONS ABOUT STEREOISOMERIC TROLLI XANTHINS, 6. 1962, 15p.
Order from K-H $18.75 K-H 6287-b

Trans. of Helvetica Chimica Acta (Switzerland) [1957] v. 40, no. 6, p. 69 and 79.

DESCRIPTORS: *Stereochemistry, *Plant pigments, Pigments, Carotenoids.

Gal'perin, S. I.
SPEECH AS A MEDIUM OF HUMAN INTERCOURSE, EXCHANGE OF IDEAS [AND] HOW MECHANISTIC MATERIALISTS "BIOLOGIZE" MAN. 19 Feb 62 [19]p. 27 refs. JPRS: 12599.
Order from OTS or SLA $1.60 62-19763

Trans. of mono. Kritika Teorii Biologizatsii Cheloveka (Criticism of the Theories of Biologization of Man) Leningrad, 1960, p. 22-38.

DESCRIPTORS: *Speech, *Man, Animals, Brain, Nervous system, Psychology, Physiology, *Biology, Motor reactions, Philosophy.

Lenin, Marx and Pavlov are quoted to show man has a "psyche". Whether or not this psyche is immortal is not stated, but the author maintains that even animals have an elemental psyche.

Khan-Magometova, I. D.
ULTRAVIOLET FLUORESCENCE OF PYRIDOXINE, INDOLE, AND SOME OF THEIR DERIVATIVES.
22 Dec 61 [8]p. 6 refs. [NIH] no. 12-15-61.
Order from OTS or SLA $1.10 62-15733

Trans. of #Biofizika (USSR) 1958, v. 3, no. 5, p. p. 558-561.

DESCRIPTORS: Organic compounds, *Pyridoxine, Vitamins, *Indoles, Crystals, Fluorescence, *Ultraviolet spectroscopy, Microstructure, Luminescence, Biophysics.

The study of fluorescence in the near ultraviolet spectrum portion in various microcrystals, including some biologically important ones, may be carried out by means of an ultraviolet microscope with an attached spectrograph. The fluorescene spectra of crystals of a series of organic compounds were obtained: of pyridoxine and its derivatives, and of indole and two of its derivatives. The apparatus was also used for studying ultraviolet fluorescene in solutions of fluorescent substances. The fluorescence spectra of water solutions of pyridoxine and of indole and their derivatives were obtained. (Author)

Mindlin, S. Z., Kubyshkina, T. A., and Alikhanyan, S. I.
UTILIZATION OF ACT. RIMOSUS MUTANTS FOR THE STUDY OF OXYTETRACYCLINE SYNTHESIS. [1962] 7p.
Order from ATS $12.10 ATS-49P59R

Trans. of #Antibiotiki (USSR) 1961, v. 6, no. 7, p. 623-629.

DESCRIPTORS: Actinomyces, *Mutations, *Tetracyclines, Synthesis, Genetics.

Napalkov, A. V.
THE FUTURE OF BIOLOGICAL SCIENCE (Zestra Biologicheskoi Nauki). Review of mono. "Voprosy Kibernetiki v Biologii i Meditsine", by V. D. Moiseev, pub. Moscow, 1960. 3 Nov 61 [6]p. 1 ref. JPRS: 10821.
Order from OTS or SLA $1.10 62-13255

Trans. of Nauka i Zhizn' (USSR) 1961, v. 28, no. 3, p. 72-73.

DESCRIPTORS: *Biology, Medicine, Scientific research, Cybernetics.

Orlova, N. V., Zaitseva, Z. M. and others.
SOME PHYSIOLOGICAL PECULIARITIES OF INACTIVE MUTANTS OF ACT. RIMOSUS, THE PRODUCER OF OXYTETRACYCLINE. [1962] 7p.
Order from ATS $11.75 ATS-50P59R

Trans. of #Antibiotiki (USSR) 1961, v. 6, no. 7, p. 629-635.

DESCRIPTORS: *Actinomyces, *Mutations, *Physiology, Tetracyclines, Genetics.

Shugailin, A. V. and Pakshin, I. P.
THE UKRAINIAN REPUBLIC CONFERENCE ON PHILOSOPHICAL PROBLEMS OF BIOLOGY. 13 Nov 61 [11]p. JPRS: 11102.
Order from OTS or SLA $1.60 62-13544

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1961, no. 6, p. 830-835.

DESCRIPTORS: *Conferences, *Scientific reports, *Biology, Philosophy.

Anatomy and Physiology

ACTA PHYSIOLOGICA SINICA, 1960, VOL. 24, NO. 2: SELECTED ARTICLES. 24 Oct 61 [39]p. 45 refs. JPRS: 10778.
Order from OTS or SLA $3.60 62-13214

Trans. of Sheng Li Hsüeh Pao (Chinese People's Republic) 1960, v. 24, no. 2, p. 105-109, 129-135, 141-148.

DESCRIPTORS: *Caffeine, Physiology, *Pentothal sodium, Pharmacology, Temperature, *Thiamine, *Tissues (Biology), Noise, *Hearing, Analysors (Psychology).

Contents:
The effect of caffein on the narcosis time of S35-Thiopental sodium and on its distribution and elimination, by Chu Shou-p'eng
The effect of high temperature on the vitamin B_1 (thiamine) content of certain tissues in rabbit, by Tseng Hsien-ying
Quantitative characteristics of the masking of quick sounds by noise in the periphery of auditory analysors in cats, by Liang Chih-an and E. A. Radionova.

FORTY YEARS' DEVELOPMENT OF SOVIET MORPHOLOGY (Sorok Let Razvitiya Sovetskoi Morfologii). [1961] 8p.
Order from OTS or SLA $1.10 62-15093

Trans. of Arkhiv Anatomii, Gistologii i Embriologii (USSR) 1957, v. 34, no. 5, p. 3-7.

DESCRIPTORS: *Morphology, Anatomy, Embryology, Histology, Medical research

PHYSIOLOGY JOURNAL, 1961, VOL. 7, NO. 5: SELECTED ARTICLES. 11 Jan 62 [43]p. 60 refs. JPRS: 11906.
Order from OTS or SLA $4.60 62-15488

Trans. of Fiziologichnyi Zhurnal (USSR) 1961, v. 7, no. 5, p. 602-606, 617-629, 667-670, 672-674, 709-710.

DESCRIPTORS: *Physiology, Acceleration, Resistance, Radiation sickness, Mountains, Climatic factors, Circulatory system, Nucleic acids, Ultrasonic radiation, Radio waves, Corticosteroids, Adrenal glands, Ethylenes, Polymers, Arteries, Surgery, Medical equipment.

Contents:
A comparative study of resistance to radial acceleration, by N. N. Syrotynin
Chemoprophylaxis and chemotherapy of experimental acute radiation sickness, by A. A. Gorodet'skyi and V. A. Baraboi
The effect of mountain climate on the cardiovascular system, by M. V. Il'chevych and M. A. Kodratovych
Dynamics of changes in the content and exchangeability of nucleic acids after ultrasound irradiation, by M. Yu. Khursin
The effect of radiowaves of the three-centimeter waveband on the functional condition of the adrenal cortex, by S. F. Gorodets'ka
The application of polyethylene tubes for angiostomy using London's method, by T. K. Valueva.

Aleshin, B. V.
SEVERAL ASPECTS OF THE REGULATION OF ENDOCRINE GLANDS (Nekotorye Voprosy Regulyatsii Endokrinnykh Zhelez). [1961] 45p. 127 refs. [NIH] no. 86.
Order from OTS or SLA $4.60 62-15130

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1955, v. 39, no. 3, p. 276-298.

DESCRIPTORS: *Endocrine glands, Nervous system, Physiology, Secretion.

Alnatov, V. V.
LONGEVITY (Dolgoletie). 6 Nov 61 [17]p. 4 refs. JPRS: 10933.
Order from OTS or SLA $1.60 62-13336

Trans. of Priroda (USSR) 1961 [v. 50] no. 7, p. 40-44.

Portions of this report will not reproduce well.

DESCRIPTORS: *Age, Mountains, Ecology, Nutrition, Infectious diseases.

In some mountainous parts of the world the percentage of very old people is much higher than in other parts of the world. (This does not hold true for Switzerland, however.) Possible reasons for the longevity of very old mountaineers are discussed. These reasons include the role of heredity, the possibility that only the strongest infants survive, the favorable characteristics of the mountaineers way of life (food rich in protein, the mobile way of life which prevents obesity, and a high level of personal hygiene), the absence of infections because of the scattered population, the high ultraviolet radiation, and the high energy of cosmic radiation.

Baranov, M. N.
DISTRIBUTION AND SPECIFIC ACTIVITY OF LABILE PHOSPHORUS COMPOUNDS IN DIFFERENT LAYERS OF CEREBELLUM. [1961] [13]p. 24 refs.
Order from OTS or SLA $1.60 62-15042

Trans. of a Russian language article from an unidentified source, n. d.

DESCRIPTORS: *Phosphorus compounds, *Brain, Tissues (Biology), Distribution.

On the basis of the replacement of the precipitation method by a technique entailing isobutanolic extraction of phosphomolybdic acids, a scheme was elaborated for the analysis of cerebral tissue, by the use of which it was possible to determine, within sufficiently accurate limits, the content and specific activity of inorganic phosphorus, phosphocreatine and ATP in one aliquot of cerebral tissue (2-4 mg dry weight). The fixing of frozen cerebral tissue in an acetone-alcohol mixture permitted the decomposition of labile phosphorus compounds, accompanying the preparation of slices on a freezing microtome, to be averted. The level of abundance of inorganic phosphorus, ATP and phosphocreatine was roughly identical in different cerebellar layers, with the phosphocreatine content proving to be markedly higher than in the cerebral hemispheres. The value for the specific activity of inorganic phosphorus, phosphocreatine and ATP was higher in the molecular and lower in the granular layer of the cerebellar cortex, which denotes a lower rate of penetration on the part of phosphoric acid into the cere bellar cortex in its deeper layers. In the white matter, situated directly underneath the cerebellar cortex, a comparatively high content of energy-rich compounds is recorded, and a high value for their specific activities, which indicates an active metabolism on the part of the myelinated fibers in the white matter.

Biryukov, D. A.
INTERRELATION BETWEEN THE CEREBRAL CORTEX AND INTERNAL ORGANS. [1961] 9p. 2 refs.
Order from OTS or SLA $1.10 62-15053

Trans. of Fiziologicheskii Zhurnal SSSR, 1956, v. 42, no. 2, p. 142-148.
Another trans. is available from OTS $0.50 as 59-11051, JPRS(DC)-L-875, 14 Nov 58, 11p.
DESCRIPTORS: *Cerebral cortex, *Nervous system, Physiology.

[Borovskii], M. L.
CURRENT STATUS OF THE STUDY OF THE TROPHIC FUNCTION OF THE NERVOUS SYSTEM AND NEURO-DYSTROPHIES. [1961] [17]p. 76 refs.
Order from OTS or SLA $1.60 62-15051

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1957, v. 57, no. 9, p. 1171-1178.
Another trans. is available from LC or SLA mi$3.00, ph$6.30 as 61-19184, NIH-9-32-58, 19 Aug 58, 33p.

DESCRIPTORS: *Nervous system, Physiology, *Nutrition

Boskovic, M.
THE MORPHOLOGY, THE CONTENTS, AND THE TOPOGRAPHY OF THE PETROMASTOID CANAL IN MAN (Morfologija, Sadrzaj i Odnosi Petromastoidnog Kanala kod Coveka) tr. by Ivan Stefanovic. Doctoral Dissertaion, Belgrade U. 30 Mar 57. 1962 [30]p. 58 refs. PL-480 HEW.
Order from OTS $0.50 60-21665

Trans. of Acta Medica Iugoslavica, 1958, v. 12, suppl. 1, 43p.

DESCRIPTORS: *Ear, *Anatomy, Infections, Brain, *Bones, *Skull, Bibliography, Morphology

The petromastoid canal is seperate from the mastoid cavities by a layer of osseous tissue, except in the level of tiny vascular openings and dehiscences, which appear in the walls of the periantral part. These communications of the petromastoid canal with the pneumatic cavities of the middle ear are opened in the course of the involution of the subarcuate pit, and also in the course of the development of its periantral prolongations. By these dehiscences and tiny vascular openings in the wall of the petromastoid canal, the endocranium communicates with the mastoid and petrosal pneumatic cavities. Because of this, the petromastoid canal represents the potential path on which the inflammatory processes of the inflammation of the middle ear may be carried on to the endo - cranium. (Author)

Bykov, K. M.
FURTHER DEVELOPMENT OF THE PROBLEMS OF PHYSIOLOGY AND PATHOLOGY OF THE CORTICOVISCERAL SYSTEM [Dal'neishee Razvitie Problemy Fiziologii i Patologii Kortikovissteral'nykh Vzaimootnoshenii]. [1961] 20p.
Order from OTS or SLA $1.60 62-15052

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1955, v. 5, no. 4, p. 449-462.
Another trans. is available from SLA as RT-4273.

DESCRIPTORS: *Nervous system, *Conditioned reflex, Physiology, Pathology, *Analyzers (Psychology)

Chernomordikov, V. V.
AIR HUMIDITY AS AN ECOLOGIC-PHYSIOLOGICAL FACTOR. 26 Jan 62 [7]p. 5 refs. JPRS: 12172.
Order from OTS or SLA $1.10 62-15667

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 140, no. 4, p. 935-937.

DESCRIPTORS: *Air, *Humidity, Ecology, Physiology, Rats, *Heat production (Biology), Body temperature.

Chernigovskii, V. N.
FORTY YEARS OF SOVIET PHYSIOLOGY (Sovetskaya Fiziologiya za 40 Let). [1961] 16p.
Order from OTS or SLA $1.60 62-15097

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1957, v. 12, no. 5, p. 9-18.

DESCRIPTORS: *Physiology, Pathology, Nervous system, Medical research, Cerebral cortex, Tissues (Biology).

Engelhardt, A. and Stuettgen, G.
ANALYSIS OF THE DECREASE OF SKIN TEMPERATURE CAUSED BY TOBACCO SMOKE. 1962, 15p.
Order from K-H $18.75 K-H-3629a

Trans. of an unidentified German language article, n. p., n.d.

DESCRIPTORS: *Skin, Temperature, *Cigarettes, Smokes, Analysis.

Frank, G. M.
PHYSICAL, CHEMICAL AND STRUCTURAL PROCESSES DURING INITIATION AND PROPAGATION OF IMPULSE THROUGH THE NERVE FIBER. [1961] 16p. (15 figs. omitted) 17 refs.
Order from OTS or SLA $1.60 62-15064

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1958 [v. 23] no. 1, p. 26-38.

DESCRIPTORS: *Nervous system, *Stimulation, Electrical properties, Biophysics, *Neuromuscular transmission.

Facts are presented that are suggestive of the mobility of the substratum subjected to stimulation, of the occurrence of changes in its physical and chemical state and of its structural re-arrangement in the initiation and propagation of impulses.

Frol'kis, V. V.
ON THE MECHANISM OF ADAPTATION OF REFLEX REACTIONS. [1961] 9p. (3 figs. omitted) 16 refs.
Order from OTS or SLA $1.10 62-15054

Trans. of Fiziologicheskii Zhurnal SSSR, 1956, v. 42, no. 10, p. 854-860.

DESCRIPTORS: *Conditioned reflex, *Adjustment (Psychology), Motor reactions, Reaction (Psychology), Circulatory system, Heart, *Nervous system.

At a certain stage of development of a pathological state there exists a reduction of the "period of adaptation." Experiments on animals have shown that this period is marked by an intensified reflex excitability of the cardiovascular system. During the pathological state of the heart, the appearing excitability of its interreceptor units brings about changes of the functional state of nervous centers. It is under conditions of this functional state that the changes in the speed of adaptation take place.

Gippenreiter, B. S.
PROBLEMS OF THE PHYSIOLOGY OF SPORTS: CONCLUSIONS OF ARTICLES. 29 Sep 61, 23p. JPRS: 10259.
Order from OTS $0.75 61-31624

Trans. of mono. Problemy Fisiologii Sporta, Moscow, 1960, p. 18-19, 27, 33-34, 42-43, 47, 54-55, 64, 76, 85-86, 98, 106-107, 111, 122, 133, 143, 152, 160, 165, 176, 185-186, 198-199, 211-212, 219, 229, 238, 248-249, 263-264, 274-275, 281-282, 289, 296, 302, 314, 323-324.

DESCRIPTORS: Physiology, *Physical fitness, Training, *Exercise, *Recreation.

Gurevich, B. Kh.
CYBERNETICS AND CERTAIN MODERN PROBLEMS OF PHYSIOLOGY OF THE NERVOUS SYSTEM. [1961] 23p. [NIH] no. 135.
Order from OTS or SLA $2.60 62-15109

Trans. of Akad[emiya] Nauk SSSR. Vestnik, 1957, v. 27 [no. 9] p. 31-40.

DESCRIPTORS: *Nervous system, Physiology, *Cybernetics.

Kirshenblat, Ya. D.
GONADOTROPHIC HORMONES (Gonadotropnye Gormony). [1961] 16p. 58 refs. [NIH]-90.
Order from OTS or SLA $1.60 62-15125

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1956, v. 2, no. 6, p. 108-116.

DESCRIPTORS: *Testes, *Hormones, Nervous system, Endocrine glands.

Kovalenko, T. M.
THE INFLUENCE OF THE THYROID HORMONES ON THE RESTORATIVE REGENERATION OF THE SKELETAL MUSCLE IN MAMMALS (Vliyanie Germonov Shchitovidnoi Zhelezy na Protsessy Reparatyvnoi Regeneratsii Skeletnoi Myshechnoi Tkani Mlekopitayushchikh). 15 Jan 62 [13]p. 36 refs. NIH no. 1-19-62.
Order from OTS or SLA $1.60 62-15735

Trans. of Arkhiv Anatomii, Gistologii i Embriologii (USSR) 1957, v. 34, no. 1, p. 22-28.

DESCRIPTORS: *Mammals, Muscles, Regeneration, *Thyroid hormones, Biochemistry, Hormones

The restorative regeneration of the skeletal muscle was studied in 180 sexually immature white mice of the male sex. The research project in question comprised four series of experiments: Series I, a control series, carried out on normal animals; Series II, carried out on animals in which the thyroid gland function had been disturbed by the administration of methylthiouracil; Series III, carried out on thyroidectomized animals, and Series IV, in which the function of the thyroid gland had been disturbed by the administration of iodothyrin. The experimental lesions made were located in the m. gastrocnemius. The weight and the gas metabolism of the animals, as well as the microstructure of the thyroid glands were determined and checked for changes occurring during the regenerative process. Thyroidectomy as well as a temporary thyroid function block produced by the administration of methylthiouracil delay regeneration and lead to drastic morphological changes in the newly formed muscle tissue. The dystrophic changes which develop after the administration of methylthiouracil are more severe than those which follow thyroidectomy. The overwhelming majority of the muscle tubules and fibers become necrobiotic and undergo degeneration, while the necrotic foci become filled with connective tissue. (Author)

Kreps, E. M.
ON THE BIOCHEMICAL CHARACTERISTICS OF THE ACTIVITY OF THE CORTEX OF THE LARGE HEMISPHERES OF THE BRAIN. [1961] 10p. 5 refs.
Order from OTS or SLA $1.10 62-15063

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1957, v. 7, no. 1, p. 75-82.

DESCRIPTORS: *Nervous system, *Cerebral cortex, *Conditioned reflex, *Analyzers (Psychology), Brain

This appears to be a lecture read at the conference held in memory of the twentieth anniversary of I. P. Pavlov's death, which was held on 27 February 1956 in Leningrad.

Lissak, Kalman.
ELECTROPHYSIOLOGICAL RESEARCH IN HUNGARY ON SUBCORTICAL STRUCTURE. 25 Nov 60 [7]p. JPRS: 6297.
Order from OTS or SLA $1.60 62-19187

Trans. of excerpts from Magyar Tudomany (Hungary) 1960, v. [5]67, no. 8, p. 486-489.

DESCRIPTORS: *Electroencephalography, *Cerebral cortex, *Hypothalamus, Conditioned reflex, Physiology, Sleep.

Muskina, N. A.
DYNAMICS OF REFORMATION OF CONDITIONED REFLEXES PRESENT AND AFTER REFLEXES OF DEPRESSION OF ALPHA RHYTHYM AND THEIR DIFFERENTIATION. [1961] 6p. (4 figs. omitted) 6 refs.
Order from OTS or SLA $1.10 62-15046

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1956, v. 6, no. 1, p. 157-163.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-11049, JPRS(DC)-L-877, 14 Nov 58, 8p.

DESCRIPTORS: *Electroencephalography, Motor reactions, Conditioned reflex, Physiology.

Naroditskaya, G. D.
COMPLEX DYNAMIC STRUCTURE IN CHILDREN OF DIFFERENT AGES. [1961] [8]p.
Order from OTS or SLA $1.10 62-13793

Trans. of [Akademiya Nauk SSSR]. Institut Vysshei Nervnoi Deyatel'nosti. Trudy. [Seriya Patofiziologicheskaya] 1956, v. 2, p. 129-135.

DESCRIPTORS: *Children, Motor reactions, Conditioned reflex, Reaction (Psychology) Inhibition, Stimulation, *Age factors, Verbal behavior, *Group dynamics.

After elaborating the conditioned motor reactions to a series of visual stimuli (pictures of different birds) and inhibitory reactions (to pictures of different beasts) and then using generalizing words (the words "birds" and "beasts") as stimuli, the work "bird" evoked a positive conditioned motor reaction, while the word "beast" evoked an inhibitory reaction. After elaborating a conditioned motor reaction to the generalizing work "bird" and a differentiation from it with the word "beast" and then replacing these verbal stimuli by direct stimuli (visual images of different birds and beasts) all the pictures of birds evoked conditioned reactions, while all the pictures of beasts evoked inhibitory ones. (Author)

Nikolaeva, N. I.
CHANGES IN THE EXCITABILITY OF VARIOUS REGIONS OF THE CEREBRAL CORTEX IN THE PRESENCE OF THE FORMATION OF MOTOR CONDITIONAL REFLEXES. [1961] 7p. 10 refs.
Order from OTS or SLA $1.10 62-15057

Trans. of Fiziologicheskii Zhurnal SSSR, 1955, v. 41, no. 1, p. 19-24.

DESCRIPTORS: *Cerebral cortex, *Conditioned reflex, Motor reactions, Nervous system, Stimulation.

Direct stimulation of the region of the motor analyzer in cats in which the appropriate conditioned reflexes had been established showed that rise in the excitability of the cerebral cortex at the point of reinforcing stimulation produced by the signal stimulus sets in prior to the appearance of visible signs of the conditioned reflex and that it is localized in precisely this point and cannot be observed at points 2-3 mm away. The increase in the excitability of the cortex at the point of reinforcing stimulus steadily increases as the conditioned reflex is strengthened and reaches a maximum at 100 percent conditioned response. Analogous changes of excitability develop at neighboring points but they are weaker and disappear long before the final strengthening of the conditioned reflex. A stage subsequently sets in which is characterized by

a clearly expressed increase in excitability at the point of signal stimulation and by the absence of any changes whatsoever in the excitability in the neighboring points. Here there is undoubted participation of the limiting irradiation of inhibition. It is subsequently intensified and this leads to a stage of specialization of the reflex. The signal stimulus now produces a sharp increase in the excitability at the point of application of the reinforcing stimulation (the threshhold is lowered by 4-5 mm) while at the neighboring points there is a very appreciable lowering of excitability.

Pavlov, B. V.
CONFERENCE ON PROBLEMS OF HIGHER NERVOUS ACTIVITY (NO. 19, LENINGRAD, 19-24 DEC 60) 15 Jan 62 [7]p. JPRS: 12072.
Order from OTS or SLA $1.10 62-15498

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1961, v. 11, no. 4, p. 766-768.

DESCRIPTORS: *Conferences, *Nervous system, Physiology, Pathology, Conditioned reflex.

Rafal'skii, Ya. D.
THE CONTENT OF CHOLESTEROL, PHOSPHOLIPIDS, PROTEIN AND LIPOPROTEIN FRACTIONS OF THE BLOOD SERUM IN WOMEN IN THE PROCESS OF AGING DURING THE MENOPAUSE AND CLIMACTERIC NEUROSIS. 13 Nov 61 [15]p. 32 refs. JPRS: 10915.
Order from OTS or SLA $1.60 62-13311

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1961, v. 7, no. 4, p. 82-88.

DESCRIPTORS: *Blood proteins, Cholesterol, Lipids, Lipoproteins, Metabolism, *Women, Age, *Climacteric, Psychoneurosis, Bibliography.

Between the ages of 35-39 to 50-59 there takes place in women an increase of the levels of cholesterol, phospholipids, cholesterol-phospholipid coefficient, the percentage content of alpha$_2$- and beta-globulins, and beta-lipoproteins, as well as a decrease in the levels of total protein and percentage content of alpha$_1$-globulins and alpha-lipoproteins of the blood serum. In the 60-69 age group a tendency of reduction of the cholesterol level and percentage content of alpha$_2$-globulins of the blood serum is observed as compared to the 50-59 age group. With advancing age a more pronounced increase of the cholesterol level was elicited in women at the stage of menopause, and a particularly noticeable change in the metabolism of lipids and lipoproteins was elicited in the group of women with menopause and climacteric neurosis. In age-related changes of the lipid and lipoprotein metabolism, in addition to the age factor, a definite role is played by the age-related neural reorganization and hypoestrogenemia which develops during certain periods of the menopause. Change in lipid and lipoprotein metabolism during certain periods of senescence and climacterium, probably, represents a factor which contributes to the age-related progress of atherosclerosis. (Author)

Rosin, Ya. A.
THE REGULATION OF PHYSIOLOGICAL PROCESSES (CERTAIN LAWS). 30 Jan 62 [16]p. JPRS: 12246.
Order from OTS or SLA $1.60 62-15655

Trans. of mono. Neurchumoral Regulation and the Hematoencephalic Barrier, Moscow, 1961, chap. 10, p. 220-233.

DESCRIPTORS: *Physiology, Ecology, *Adjustment (Psychology), Reaction (Psychology), Circulatory system, *Nervous system.

Rusinov, V. S.
N. E. VVEDENSKII, A. A. UKHTOMSKII'S THEORY ON INHIBITION AND ITS RELATION TO THE PAVLOVIAN THEORY. [1961] [13]p. 1 ref.
Order from OTS or SLA $1.60 62-15058

Trans. of Zhurnal Vysshei Nervnoi Deyatel'nosti (USSR) 1955, v. 5, no. 2, p. 145-156.

DESCRIPTORS: *Nervous system, Inhibition, Stimulation, Excitation, Theory, *Analyzers (Psychology)

The theory of Vvedenskiy of the basic nerve processes, of the interrelationship between excitation and inhibition, the concept of stationary excitation (theory of parabiosis), the principle of the phasicity of the development of physiological processes in the nervous system, of the significance of the time factor in physiological reactions, of the functional condition of an excitable structure as a most important determinant of the character of an operating reaction, of the various forms of excitation, and the further development by Ukhtomskiy of Vvedenskiy's idea in the form of theory of the functional-dynamic principle of reciprocity and of the dominant as a general principle of operation of the nervous system, and on the assimilation of the rhythm of excitation—all this is included in the foundation of our knowledge of the physiological mechanisms of reflex activity and is of significance for the further development of physiology, and is important for clinical medicine. (Author) (Reported at the Ninth Session of the Academy of Medical Sciences, 9 March 1955)

Shargorodskii, L. Ya.
SOME PROBLEMS IN STUDYING THE VEGETATIVE NERVOUS SYSTEM [Nekotore Voprosy Ucheniya o Vegetativnoi Nervnoi Sisteme]. [1961] 3p. 1 ref.
Order from OTS or SLA $1.10 62-15065

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1955, v. 55, no. 1, p. 41-42.
Another trans. is available from SLA as RT-3773.

DESCRIPTORS: *Nervous system, *Cerebral cortex Physiology, Conditioned reflex, Analyzers (Psychology)

Sheivekhman, B. E.
METHODS FOR INVESTIGATION OF THE HEARING FUNCTIONS WITH THE PURPOSE OF SELECTING HEARING AIDS (K Metodam Issledovaniya Slukhovykh Funktsii s Tsel'yu Podbora Vspomogatel'nikh Sredstv Slukha). [1961] 12p. 17 refs.
Order from OTS or SLA $1.60 62-15322

Trans. of Probl[emy] Fiziolog[icheskoi] Akustiki (USSR) 1950, v. 2, p. 123-128.

DESCRIPTORS: *Hearing, *Deafness, Children, Physiology, Auditory acuity, Auditory perception, Auditory thresholds, *Hearing aids, Selection.

Szabo, Gyorgy and Magyar, Zsuzsa.
EFFECT OF VASODILATORS ON CAPILLARY PERMEABILITY. 15 Jan 62 [28]p. JPRS: 11976.
Order from OTS or SLA $2.60 62-19592

Trans. of Magyar Tudomanyos Akademia Biologiai es Orvosi Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1961, v. 12, no. 3, p. 245-261.

DESCRIPTORS: *Capillaries, Permeability, Autonomic nervous system, Arteries, Physiology, Vasomotor drugs.

Tarakanov, E. I.
FORTY YEARS OF SOVIET UNION ADVANCES IN THE MORPHOLOGY OF THE ENDOCRINE GLANDS (Uspekhi Morfologii Endokrinnykh Zhelez v Sovetskom Soiuze za 40 Let). [1961] 17p. RSTP S-37.
Order from OTS or SLA $1.60 62-15081

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1957, v. 3, no. 5, p. 38-48.

DESCRIPTORS: *Endocrine glands, Morphology, Physiology

Trachik, V.
FUNCTIONAL STATE OF HIGHER SEGMENTS OF THE CENTRAL NERVOUS SYSTEM AND ADRENO-PITUITARY ACTIVITY. [1961] 30p. 43 refs. [NIH] no. 99.
Order from OTS or SLA $2.60 62-15122

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1957, v. 3, no. 3, p. 25-34.

DESCRIPTORS: *Autonomic nervous system, Stimulation, Inhibition, *Endocrine glands, Brain, Urine, Steroids.

The functional states of the higher divisions of the central nervous system influence, to a marked degree, the activity of the pituitary-adrenal system. Equilibrium and concentration of the basic nervous processes in the cortex of the cerebral hemispheres is accompanied by a low content of 17-ketosteroids in the urine. An aberrancy in the relations between the processes of stimulation and those of inhibition, elicited by overstress of the nervous processes, is accompanied by a significant elevation of the content of 17-ketosteroids in the urine. Chronic overstress of the strength of the inhibitory process, even in dogs of various types of nervous systems, is accompanied by the highest content of 17-ketosteroids in the urine. In the dog of the lively, unbalanced type of nervous system, this is expressed more prominently than in the other dogs. There is noted a double type of reaction of the pituitary-adrenal system to stimulation by the central nervous system: (1) a transient but great elevation of the urinary content of 17-ketosteroids; and (2) a prolonged, less pronounced, elevation of the 17-ketosteroid content in the urine, continuing over several successive days. (Author)

Tuzhilkova, T. N.
EFFECT OF X-RAYS ON REGENERATION OF MUSCULAR TISSUE, tr. by Mrs. E. F. Tourkoff. [1961] 2p.
Order from OTS or SLA $1.10 62-15298

Partial trans. from Meditsinskaya Radiologiya (USSR) 1956 [v. 1] no. 4.

DESCRIPTORS: *Tissues (Biology), Muscles, Regeneration, X-rays.

Zimkin, N. V.
CONFERENCE ON THE PROBLEM OF ADAPTATION, TRAINING AND OTHER METHODS OF RAISING BODILY RESISTANCE, STALINO, JAN 61. 12 Jan 62 [15]p. JPRS: 11900.
Order from OTS or SLA $1.60 62-15380

Trans. of Fiziologicheskii Zhurnal (USSR) 1961, v. 47, no. 7, p. 934-937.

DESCRIPTORS: Conferences, Public health, *Diseases, Resistance, *Adjustment (Psychology), Drugs, *Physical fitness, *Preventive medicine.

Zimkina, A. M.
ON THE TYPOLOGICAL CHARACTERISTICS OF HIGHER NERVOUS ACTIVITY IN HUMANS. [1961] 7p.
Order from OTS or SLA $1.10 62-15049

Trans. of [Voprosy] Psikhologii (USSR) 1957, v. 3, no. 1, p. 179-182.

DESCRIPTORS: *Nervous system, Physiology, *Analyzers (Psychology).

A critical discussion is presented of a previously published (date not cited) symposium edited by B. M. Teplov (Typological Characteristics of Human Higher Nervous Activity).

Biochemistry

SOVIET MEDICAL CHEMISTRY. 23 Oct 61 [24]p. 19 refs. JPRS: 10786.
Order from OTS or SLA $2.60 62-13221

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1961, v. 7, no. 3, p. 273-276, 285-291, 329-332.

DESCRIPTORS: *Glycolysis, Enzymes, Blood, *Cancer, *Proteins, *Crystalline lens, Radiation effects, Blood proteins, *Biochemistry.

Contents:

The activity of certain glycolytic enzymes in the blood of cancer patients, by V. P. Korotkoruchko and others

Protein changes in the crystalline lens from experimentally induced radiation cataract, by K. F. Firfarova and E. M. Kedrova

A conference devoted to the chemistry and biochemistry of blood plasma proteins, by V. Z. Gorkin.

Berezov, T. T.

INVESTIGATION OF THE TRANSAMINATION REACTIONS OF DICARBOXYLIC AMINO ACIDS AND THEIR AMIDES IN MALIGNANT TUMOR TISSUES [Pereaminirovanie Dikarbonovykh Aminokislot i Ikh Amidov v Zlokachestvennykh Oputkholyakh]. 19 Dec 61, 14p. 21 refs. NIH no. 12-11-61.

Order from OTS or SLA $1.60 62-15396

Trans. of Voprosy Med[itsinskoi] Khim[ii] (USSR) 1959, v. 5, no. 1, p. 39-47.

Another trans. is available from OTS or SLA $1.60 as 61-23211, NIH-5-21-61, 19 May 61 [12]p.

DESCRIPTORS: *Amino acids, *Carboxylic acids, *Amides, *Neoplasms, Biochemistry, Tumors, Enzymes, Rats, Sarcoma, Mice, Ascites, Cancer, Tissues (Biology), Stomach, *Transaminases.

In the tissues of malignant tumors (rat sarcoma M-1, Ehrlich's ascites mouse tumor, cancerous tumor of the human stomach) a highly active glutamico-aspartic aminopherase was demonstrated. A highly very active glutaminase I was detected in the preparations of sarcoma M-1, in the cells of Ehrlich's ascites cancer and in the cancerous tumor of the human stomach; the cell-free ascitic fluid of Ehrlich's tumor was completely devoid of glutaminase activity. Glutamine is transaminated with oxalacetic acid, probably after a preliminary hydrolysis, prior to the glutamic acid; however, the possibility of coordinated deamidization and transamination should not be excluded. In experimentation with the cell suspension of Ehrlich's ascites cancer, aspartic acid in addition to glutamic acid is formed from the added glutamine (without oxalacetic acid); the mechanism of the formation of aspartic acid has not been cleared up yet. In sarcoma M-1 preparations, a low asparaginase activity was established, whereas in the ascites tumor and in the sections of the cancerous tumor of the human stomach, asparaginase was almost absent. In incubation with alpha-ketoglutaric acid and with sections of sarcoma M-1, asparagin increased the formation of glutamic acid. (Author)

Bychkov, S. M.

SPECIFIC MUCOIDS IN ANIMAL AND HUMAN ORGANISMS. [1961] 25p. 15 refs. [NIH] no. 46.

Order from OTS or SLA $2.60 62-15137

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1957, v. 44, no. 1(4) p. 3-18.

DESCRIPTORS: Digestive system, Physiology, *Mucin, *Proteins, *Mucus, Body fluids, Blood, *Erythrocytes.

The specific mucoids of the human and animal organism enter, along with the other mucoproteids and mucopolysaccharides, into the composition of the secretions of the digestive organs and come into direct contact with the external medium, absorb the first harmful effects, neutralize and tend to weaken some of the noxious actions and by this participate in the defense of the organism. The physiological significance of the human specific mucoids is not exhausted by the role played by them in the defensive mechanisms of the digestive organs. Undoubtedly, these complex, high molecular compounds have a much greater and variegated biological significance. (Author)

Gorodetskaya, A. V.

EXTRACTION METHODS FOR THE PURIFICATION OF ANTIBIOTICS (Ekstraktsionnye Metody Ochistki Antibiotikov) tr. by R. Crawford. [1961] [27]p. 65 refs. [NIH] no. 6.

Order from OTS or SLA $2.60 62-15156

Trans. of Antibiotiki; Sborniki Perevodov, Obzorov i Referatov Inostrannoi Periodicheskoi Literatury (USSR) 1955, v. 8 [no. 1] p. 3-13.

DESCRIPTORS: *Antibiotics, Purification, Solvent extraction.

Literature of non-Soviet commercial undertakings (patents, etc.) is reviewed.

Kaplanskii, S. Ya.

DISORDERS OF AMINO-ACID METABOLISM IN PROTEIN DEFICIENCIES AND THEIR CORRECTION. [1961] 35p. 52 refs. [NIH] no. 50.

Order from OTS or SLA $3.60 62-15136

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1957, v. 3, no. 5, p. 340-350.

DESCRIPTORS: *Amino acids, *Metabolism, *Proteins, *Deficiency diseases.

Markov, S. M., Loshadkin, N. A., and Ramzhaev, A. M.

STUDY OF THE KINETICS OF THE REACTION BETWEEN TRUE CHOLINESTERASE OF ERYTHROCYTES AND PHOSPHOR-ORGANIC COMPOUNDS. 9 Jan 62 [6]p. 10 refs. JPRS: 11921.

Order from OTS or SLA $1.10 62-15499

Trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) [1961] v. 6, no. 3, p. 357-358.

DESCRIPTORS: *Reaction kinetics, *Cholinesterase, *Erythrocytes, Phosphorus compounds, Organic compounds, Inhibition, Enzymes.

The kinetics of the reaction of true cholinesterase of rabbit erythrocytes with the mixed ethyl paranitrophenyl ester of ethylphosphinic acid (armine) was studied by a manometric method. The rate constants found for the reaction of true cholinesterase of hemolysed rabbit erythrocytes with armine at 37.5° show that inhibition by armine proceeds at a high rate, which indicates a great affinity of this inhibitor to true cholinesterase. The activation energy is 10 kcal/mole.

Nemchinskaya, V. L.
MECHANISM OF SYNTHESIS AND OXIDATION OF FATTY ACIDS IN ANIMAL TISSUES. [1961] 49p. 68 refs. [NIH] no. 53.
Order from OTS or SLA $4.60 62-15134

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1957, v. 44, no. 1(4) p. 37-54.

DESCRIPTORS: *Fatty acids, Synthesis, Oxidation, Animals, Tissues (Biology)

During recent years pronounced achievements have been made in the study of the intermediary conversions of the fatty acids in the animal organism. Thanks to the reproduction of the oxidation of these compounds in cell-free enzyme systems obtained from mitochondria, the picture of the degradation and biosynthesis of the fatty acids is being traced out ever more clearly. The correctness of the classical theory of beta-oxidation has been confirmed by the most recent work. The establishment of the nature of the "active acetate" has assisted in the clarification of the mechanism of this process. A molecule of fatty acid, after preliminary activation, e.g., the conversion of it into acyl residues of the thioesters of CoA, enters the path of oxidation, which is composed of a recuurence of four successive stages and catalyzed by four well-known enzymes (acyl-dehydrase, enoyl-hydratase, beta-oxyacyl dehydrase and beta-ketoacyl thiolase). As the result of oxidation the entire chain of the fatty acid is degraded to high-energy thioester-acetyl-CoA, capable of condensing with oxaloacetic acid, and finally of being oxidized to CO_2 and H_2O. The biosynthesis of the higher fatty acids in preparations obtained from mitochondria can proceed by the path of combining two molecules of acetyl-CoA, with subsequent condensation with acetyl-CoA into the longest chain of the fatty acids. (Author)

Sakhatskaya, T. S.
ISOTOPIC TRACER METHODS IN HORMONE METABOLISM STUDIES. [1961] [11]p. 39 refs. [NIH]-96
Order from OTS or SLA $1.60 62-15124

Trans. of Probl[emy] Endokr[inologii i Gormonoterapii] (USSR) 1955, v. 1, [no. 5] p. 121-126.

DESCRIPTORS: *Hormones, *Metabolism, *Radioactive isotopes.

A survey, based mainly on non-Soviet literature.

Vladimirov, G. E., Ivanov, T. N., and Pravdina, N. I.
ON SOME PROPERTIES AND THE TURNOVER RATE OF THE PHOSPHORUS-CONTAINING LIPID COMPONENT OF THE PROTEIN RESIDUE IN BRAIN TISSUE. [1961] 11p. 8 refs.
Order from OTS or SLA $1.60 62-15009

Trans. of [#Biokhimiya (USSR) 1957, v. 22, no. 1/2, p. 51-58].
Another trans. is available from LC or SLA mi$2.40, ph$3.30 as 59-17380 [1959] [14]p.

DESCRIPTORS: *Brain, Physiology, *Phospholipids, Metabolism, Tissues (Biology).

The lipoprotein phosphorus fraction was isolated from brain tissue, the phosphorus of that fraction possessing a pronounced relative specific activity (about 24% for a three-hour interval). The largest quantity of phosphorus of that fraction was encountered in the medulla oblongata and in the spinal chord (up to 36-37 mg%) and the smallest in the gray matter (15 mg%). The composition of this lipoprotein brain fraction embraces a group of compounds whose phosphorus undergoes exchange at a notably faster rate than the phosphorus of the fraction as a whole, approaching the phosphorus turnover rate exhibited by phosphoproteins. These compounds did not prove to be inositol-containing in nature. The change in the functional state of the central nervous system is accompanied by several changes in rates of turnover exhibited by separate fractions of lipoprotein phosphorus (Author)

Botany

Andreeva, T. F. and Zubkovich, L. E.
OVER DE FOTOCHEMISCHE ACTIVITEIT VAN GEISOLEERDE CLOROPLAST GRANA (The Photochemical Activity of Isolated Granules of Chloroplasts) 10p. 12 refs. MTWL: 314. (text in Dutch).
Order from OTS or ETC $1.55 61-17950

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 60, no. 4, p. 681-684.

DESCRIPTORS: *Photochemical reactions, *Plants, Tests.

Avilov, A. I.
CULTURE OF AN ISOLATED ROOT OF LEGUMINOUS PLANTS (O Kul'ture Izolirovannogo Kornya Boboviyakh Rastenii). [1961] 5p. (1 fig. omitted) 8 refs. Trans. A-1316.
Order from OTS or SLA $1.10 62-13452

Trans. of Leningrad U. Vestnik (USSR) 1961 [v. 16, no. 9] Seriya Biologi[i] no. 2, p. 135-136.

DESCRIPTORS: *Plants, Tissues (Biology), Culture media, Seeds.

A survey.

Dieska, D.
ACTIVITIES OF THE SLOVAK INSTITUTE FOR POSTGRADUATE MEDICAL TRAINING FOR THE INSTITUTE'S SCIENTIFIC COUNCIL, ANNUAL REPORT, 1960: ABSTRACT. 6 Nov 61 [4]p. JPRS: 10943.
Order from OTS or SLA $1.10 62-23262

Trans. of Lekarsky Obzor (Czechoslovakia) 1961, no. 5, p. 305.

DESCRIPTORS: *Medical personnel, Personnel, Training, Czechoslovakia.

Engelbrecht, L.
CONTRIBUTIONS TO THE PROBLEM OF THE ACCUMULATION OF AMINO ACIDS IN LEAF CELLS. 1962, 18p.
Order from K-H $22.50 K-H 11095-e

Trans. of Flora; [oder, Allgemeine Botanische Zeitung] (East Germany) 1961, v. 150, no. 1, p. 73-86.

DESCRIPTORS: *Amino acids, *Plants, Cells (Biology)

Freudenberg, K. and Weinges, K.
SYSTEMATOLOGY AND NOMENCLATURE OF THE FLAVONOIDS. 1962, 7p.
Order from K-H $8.75 K-H 10444

Trans. of Tetrahedron [Letters] (U. S.) 1960, v. 8, no. 3/4, p. 336-339.

DESCRIPTORS: *Flavones, Plants, *Plant pigments

Gunar, I. I. Sinyukhin, A. M. and others.
CHARACTERISTIC OF RESPONSIVE REACTIONS OF PLANTS TO ELECTRICAL IRRITATIONS (Elektrofiziologicheskaya Kharakteristika Razdrazhimosti Rastenii. Soobshchenie 2. Kharakteristika Otvetnykh Reaktsii Rastenii na Elektricheskie Razdrazheniya). Rept. no. 2 of Electrophysiological Characteristics of Irritability of Plants. 13 Nov 61, 26p. 20 refs. Trans. A-1312.
Order from OTS or SLA $2.60 62-13506

Trans. of [Moskovskaya] Sel'skokhoz[yaistvennaya] Akademiya. Izvestiya (USSR) 1961, no. 2(39) p. 7-19.

DESCRIPTORS: *Plants, Cells (Biology) Tissues (Biology) Metabolism, Excitation, Direct currents, Intensity, *Electrical effects.

An ability is inherent in the tissues of higher plants to pass into the state of excitation under the influence of external irritants. An expanding excitation develops in the cells of the plants at irritations optimal in strength, frequency and length. The process of excitation does not arise during a strong reduction in cell metabolsim or violation of cell structures. (Author)

Krasnovskii, A. A., Brin, G. P., and Voinovskaya, K. K.
VOORWAARDEN TOT REVERSIBELE OMZETTINGEN VAN CHLOROPHYL ONDER INWERKING VAN HET LICHT (Reversible Transformations of Chlorophyll under the Influence of Light). 9p. 11 refs. MTWL: 317 (text in Dutch).
Order from OTS or ETC $1.55 61-17953

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 69, no. 3, p. 393-396.

DESCRIPTORS: *Chlorophylls, Transformations, Light, *Photochemical reactions, Reduction.

Medvedev, Zh. A.
MODERN THEORIES OF PROTEIN SYNTHESIS IN PLANTS. [1961] [19]p. 84 refs.
Order from OTS or SLA $1.60 61-23031

Trans. of [Moskovskaya] S[el'sko]kh[ozyaistvennaya] A[kademiya]. Izvestiya (USSR) 1959, no. 2(27) p. 57-74.

DESCRIPTORS: *Proteins, Synthesis, *Plants, Theory, Nitrogen, Metabolism, Genetics.

Takhtadzhyan, A. L.
SOVIET BOTANISTS IN VIETNAM. 29 Nov 61 [6]p. 4 refs. JPRS: 11373.
Order from OTS or SLA $1.10 62-13665

Trans. of Akademiya Nauk SSSR. Vestnik, 1961 [v. 31] no. 4, p. 107-110.
Another trans. is available from OTS or SLA $2.60 as 62-13258, JPRS-10769, 25 Oct 61 [26]p.

DESCRIPTORS: *Plants, Scientific personnel, Vietnam, *Trees, Ecology, Forestry.

Vasiljevic, S.
SOME STRUCTURAL CHARACTERISTICS OF DOUBLE (FALSE) GROWTH RINGS (O Nekim Karakteristikama Grade Dvostrukih -Laznih- Prstenova Prirasta) tr. by Dusan Glumac. 1961, 7p. PL-480 Agr.
Order from OTS $0.50 60-21638

Trans. of [Belgrad U.]. Sumarski Fakultet. Glasnik (Yugoslavia) 1955, no. 9, p. 311-315.

DESCRIPTORS: *Trees, *Age, Growth

An analysis of the distribution, number, and diameter of the vessels in four growth rings of the tree Acer monspessulanum L., and microphotographs of a growth ring of A. campestre L. and A. tataricum L. and of two growth rings of A. monspessulanum showed that: (1) the vessels in false growth rings are not so uniformly distributed as in growth rings of a normal structure; their irregularity consists in the fact that in some of the radial zones of the false growth rings, the vessels can be found only in groups or rows; or in the fact that sometimes not a single trachea can be found between two wide rays; (2) The number of groups of vessels and the number of radial rows which frequently may even be double, is larger on a surface unit in the false growth ring than in the growth ring of a normal structure; (3) The total number of vessels on a surface unit in the false growth rings is larger than in the second half (summerwood) of the growth rings of a normal structure and (4) The diameter of the vessels in the false growth rings is considerably narrower than in the growth rings of a normal structure. All these characteristics may greatly change the general aspect of the cross section of the false growth rings. (Author)

Zozulin, G. M.
A SYSTEM OF LIFE FORMS OF HIGHER PLANTS (Sistema Zhiznennykh Form Vysshikh Rastenii) tr. by M. Slade. [1961] [48]p. (foreign text included) 45 refs. [CSIRO] Trans. no. 5451.
Order from OTS or SLA $4.60 62-13606

Trans. of Botanicheskii Zhurnal (USSR) 1961, v. 46, no. 1, p. 3-20.

DESCRIPTORS: *Plants, Ecology, Genetics, *Trees, Classification

Life forms are defined as historical links comprising complexes of plant organisms having similar adaptations for the retention of the habitat area and for its expression. The system of life forms of higher plants proposed by the author is based on this leading character that is considered to be the result of a historical process. In this system the life forms are classified into groups, subtypes and types of life forms. In distinguishing the latter the morphogenetic effect of the environment, in particular, of phytocoenosis, was taken into consideration. As regards herbage plants, particular attention was paid to the adaptations of their subterranean parts and to the expansion of the area occupied by a plant by means of vegetative growth. (Author)

General Biology

REFERATIVNYI ZHURNAL. BIOLOGIYA (USSR) 1961, NO. 3, ABSTRACTS 3B111-3M452: SELECTED TRANSLATIONS OF ABSTRACTS OF ARTICLES BY CHINESE AUTHORS PERTAINING TO COMMUNIST CHINA (Soviet Abstracts, Biology). 26 Jan 61 [40]p. JPRS: 12178.
Order from OTS or SLA $3.60 62-15680

Complete translations of the Russian-language abstract of articles originally published in the Sino-Soviet bloc.

DESCRIPTORS: *Biology, China, Abstracting, Microbiology, Botany, Plants, Spores, Physiology, Soils, Forestry, Growth, Mollusca, Crustacea, Insects, Fishes, Parasitology, Animals, Nervous system, Endocrine glands, Secretion, Pathology, Tumors, Toxicity, Pharmagology, Chemotherapeutic agents.

REFERATIVNYI ZHURNAL. BIOLOGIYA (USSR) 1961, NO. 4, ABSTRACTS 4B54-4M333: [SELECTED TRANSLATIONS OF] ABSTRACTS OF ARTICLES PERTAINING TO COMMUNIST CHINA (Soviet Abstracts, Biology). 29 Jan 62 [39]p. JPRS: 12197.
Order from OTS or SLA $3.60 62-15650

Complete translations of the Russian-language abstracts of articles orginally published in the Sino-Soviet bloc.

DESCRIPTORS: *Biology, China, Virus diseases, Microbiology, Botany, Spermatogenesis, Plants, Growth, Soils, Physiology, Herbicides, Insects, Amphibians, Mammals, Marine biology, Parasitology, Animals, Diseases, Heart, Blood vessels, Tumors, Pathology, Pharmacology, Toxicity.

REFERATIVNYI ZHURNAL. BIOLOGIYA (USSR) 1961, NO. 5, ABSTRACTS 5A201-5M112, SELECTED TRANSLATIONS OF ABSTRACTS OF ARTICLES BY CHINESE AUTHORS PERTAINING TO COMMUNIST CHINA (Soviet Abstracts, Biology). 1 Feb 62 [30]p. JPRS: 12254.
Order from OTS or SLA $2.60 62-15774

Complete translations of the Russian-language abstracts of articles originally published in the Sino-Soviet bloc.

DESCRIPTORS: *Biology, China, Abstracting, Virus diseases, Microbiology, Plants, Soils, Parasitology, Animals, Physiology, Pharmacology, Toxicity.

Eliseev, V. G.
THE PRESENT CONCEPT OF THE CELL THEORY (O Sovremennoi Traktovke Kletochnoi Teorii). [1961] [54]p. (ref. omitted). RSTP no. 12, 58-60.
Order from OTS or SLA $5.60 62-15615

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1955, v. 39, p. 328-349.

DESCRIPTORS: *Cells(Biology), Morphology, Mitosis, Reproduction.

Parin, V.
BIOLOGY AND SPACE. 21 Nov 61 [7]p. FTD-TT-61-168; AD-267 714.
Order from OTS or SLA $1.10 62-15170

Unedited rough draft trans. from Izvestiya (USSR) 1961, 28 Mar, p. 6.

DESCRIPTORS: *Space medicine, Space flight, Manned.

Medical Specialties and Equipment

Garwacki, Janusz and Szyszko, Stanislaw.
THE POSSIBILITY OF THE EMPLOYMENT OF SOME ELEMENTS OF CYBERNETICS IN ANESTHESIOLOGY. 10 Aug 61 [12]p. JPRS: 8721.
Order from OTS or SLA $1.60 62-19476

Trans. of Polski Tygodnik Lekarski, 1961, v. 16, no. 16, p. 592-595.

DESCRIPTORS: *Cybernetics, *Anesthesia, Anesthetics, *Medical research, *Poland.

Gnedenko, Boris.
CZECHOSLOVAK REPORT ON MATHEMATICS AND MEDICAL DIAGNOSIS. 4 Jan 62 [7]p. JPRS: 11817.
Order from OTS or SLA $1.10 62-19623

Trans. from Pravda (Czechoslovakia) 1961, 4 Nov, p. 4.

DESCRIPTORS: *Medical research, *Medical equipment, *Diagnosis, Digital computers, Computers, Applied mathematics, Mathematics.

Microbiology

Busalaeva, N. N.
ON FINDING OF TICKS ORNITHODOROS CONICEPS CANESTRINI IN KAZAKHSTAN. [1961] 1p. 2 refs. NAMRU Trans. 31(T31).
Order from OTS or SLA $1.10 62-13931

Trans. of [Akademiya Nauk Kazakhskoi SSR, Alma-Ata Institut Zool[ogii]. Trud[y] 1957, v. 7, p. 290.
DESCRIPTORS: *Ticks, Aral Sea, Parasites.

Dantsig, N. M., Vlodavets, V. V., and Krichagina, N. B.
THE USE OF ULTRAVIOLET RAYS IN THE PREVENTION OF AIR-DROPLET INFECTIONS. 25 Oct 61 [14]p. 33 refs. JPRS: 10733.
Order from OTS or SLA $1.60 62-13324

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1961, v. 16, no. 7, p. 13-20.

DESCRIPTORS: *Ultraviolet radiation, Air, Decontamination, Inhibition, *Infections.

Data attest to the fact that UV air decontamination may serve as an effective hygienic and anti-epidemic measure not only during a "quite" epidemic phase, but also during the period of outbreaks of infections such as, virus influenza, scarlet fever, acute catarrhal conditions of the upper respiratory tract, etc., as well as in combatting intrahospital infections, infected surgical wounds, and postoperative complications.

Goryunova, S. V.
DISSOLVED ORGANIC SUBSTANCES IN OPEN WATER BASINS. SURVEY. 19p. 53 refs. MTWL: 393.
Order from OTS or ETC $1.85 61-32012

Trans. of Mikrobiologiya (USSR) 1948, v. 17, no. 3, p. 271-281.

DESCRIPTORS: *Sea water, *Organic materials, Solutions, Food, Biology.

Grandberg, I. I., Milovanova, S. N. and others.
INVESTIGATION OF PYRAZOLES. XXI. BIOLOGICAL ACTIVITY OF PYRAZOLE DERIVATIVES. 24 Jan 62 [15]p. 19 refs. JPRS: 12154.
Order from OTS or SLA $1.60 62-15469

Trans. of Moscow U. Vestnik. [Seriya 6: Biologiya, Pochvovedeniya] (USSR) 1961 [v. 16] no. 3, p. 27-34.

DESCRIPTORS: *Pyrazoles, Azoles, Bactericides, Fungicides, Actinomycetes, Disinfectants, Tests, Microorganisms, Growth, Inhibition.

Among the compounds of the pyrazole series (96 substances) tested on microorganisms destructive of caoutchouc high activity is possessed only by compounds containing mercury. The simplest pyrazole systems do not show insecticidal properties. Mercury derivatives of pyrazole were shown to be strongly active against all kinds of bacteria, fungi, and actinomycetes and should find practical application as antiseptics. (Author)

Imshenetskii, A. A.
LIFE AT HIGH TEMPERATURES. [1961] 14p. (4 figs. omitted)
Order from OTS or SLA $1.60 61-23209

Trans. of Priroda (USSR) 1960, no. 8, p. 19-24.
Another trans. is available from OTS $0.75 as 61-11973, 29 Dec 60, 23p.
DESCRIPTORS: *Microorganisms, Temperature, Ecology.
A collection of popular articles on thermophilic bacteria.

Mishustin, E. N.
MICROBIC ASSOCIATIONS IN SOILS AND METHODS OF THEIR INVESTIGATION. [1961] 35p. 48 refs. [NIH] no. 111.
Order from OTS or SLA $3.60 62-15120

Trans. of Mikrobiologiya (USSR) 1955, v. 24, no. 4, p. 474-485.

DESCRIPTORS: Soils, *Microorganisms, Physiology, Agriculture

Novikova, S. I.
INITIAL STAGES OF SPLITTING OF DISACCHARIDES BY MICROORGANISMS. [1961] 29p. 60 refs. [NIH] no. 113.
Order from OTS or SLA $2.60 62-15119

Trans. of Mikrobiol[ogichnyi] Zhurnal (USSR) 1956, v. 18, no. 4, p. 47-56.

DESCRIPTORS: *Saccharides, *Microorganisms, Physiology, Carbohydrates, Hydrolysis

Petrovic, Z.
CONTRIBUTION TO THE KNOWLEDGE OF TRICHOMONADS. PT. I. THE ISOLATION AND MAINTENANCE OF 5 TRICHOMONAS SPECIES IN VARIOUS CULTURE MEDIA (Prilog Poznavanju Trihomonadida) tr. by M. Dordevic. 1962, 19p. 2 refs. PL-480 Agr.
Order from OTS $0.50 60-21625

Trans. of [Arkhiv Bioloskikh] Nauka (Yugoslavia) 1950, v. 2, no. 1, p. 33-[50].

DESCRIPTORS: *Trichomonas, *Protozoa, Growth, *Culture media, Sodium compounds, Chlorates, Nutrition, Starches

The five trichomonases belong to the followed species: T. bosi Simić 1940, T. intestinalis Leuckart 1879, T. intestinalis var. muris Simić 1933, T. elongata Steinberg 1862, and T. vaginalis Donne 1837. Of our 19 culture media, 14 were composed of two parts: a solid part forming an oblique layer in the test-tube, and a fluid part covering the solidified base. Five other media had only fluid components. The results indicate that T. bosi multiplies most intensely and maintains itself for the longest time in agar-serum. T. elongata does best in agar-serum and agar-ascites: T. intestinalis var. muris in agar-ascites and agar-serum; and T. vaginalis, in agar-serum. No differences were found when cultures of the five trichomonads on salted media were compared with cultures on media without sodium chlorate. An addition of rice starch to the fluid part of the culture media noticeably increased the multiplication only for T. bosi, T. elongata, and T. vaginalis. (Author)

Razumovskaya, Z. G. and Loytsyanskaya, M. S.
RESEARCH ON PHYSIOLOGY OF THE ACETOBACTER. [1961] 44p. 71 refs. [NIH] no. 115.
Order from OTS or SLA $4.60 62-15118

Trans. of Mikrobiologiya (USSR) 1956, v. 25, no. 6, p. 727-741.
DESCRIPTORS: *Acetobacter, Physiology

Shen, R. M., Parfanovich, M. I., and Galegov, G. A.
INTRACELLULAR LOCALIZATION OF HERPES VIRUS IN EXPERIMENTAL ENCEPHALITIS OF RABBIT. [1961] [10]p. 16 refs.
Order from OTS or SLA $1.10 62-13944

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 538-541.

DESCRIPTORS: Rabbits, *Encephalitis, *Herpes, *Virus diseases, Cells (Biology).

The method of differential centrifugation using as suspending media sucrose solutions of high molarity (1.8 M) made it possible to separate the cell components of nerve tissue and obtain a pure nuclear fraction. During development of experimental herpetic encephalitis in the rabbit the biologically active virus first appeared and was principally localized in the cytoplasmatic fraction. (Author)

Sturm, L. D. and Orlova, S. I.
THE CONVERSION OF FAT, PARAFFIN AND PALMITIC ACID UNDER THE INFLUENCE OF MICROORGANISMS FROM LAKE ALA KUL. 29p. (foreign text included). 13 refs. MTWL: 169.
Order from OTS or ETC $2.43 61-17855

Trans. of Mikrobiologiya (USSR) 1937, v. 6, no. 6, p. 754.

DESCRIPTORS: *Fats, Fatty acids, Hydrocarbons, *Microorganisms, Fuels, *Decomposition.

Topolska, Drahotina.
WORK OF THE INSTITUTE OF VIROLOGY OF THE CZECHOSLOVAK ACADEMY OF SCIENCES (O Ceatach Ceskoslovenskej Virologie). 31 July 61 [9]p. JPRS: 9822.
Order from OTS or SLA $1.10 62-19690

Trans. of Predvoj (Czechoslovakia) 1960, v. 4, no. 24, p. 4-5.

DESCRIPTORS: *Microbiology, Virus diseases, Medical research, Preventive medicine, Czechoslovakia

Neurology and Psychiatry

Bailey, Pearce.
SOVIET NEUROLOGY UNDER THE SIXTH FIVE-YEAR PLAN: A DIGEST OF ITS PROGRAM AS PRESENTED BY PROFESSOR N. I. GRASHCHENKOV. [1961] 20p.
Order from OTS or SLA $1.60 62-15617

Originally presented at the Plenum of the Directorate of the All-Union Society of Neuropathologists and Psychiatrists, 5 Feb 56 (pub. in Zhurnal Nevropatologii i Psikhiatrii (USSR) 1956, v. 56, no. 10, p. 765-777).

DESCRIPTORS: *Neurology, Neuropsychiatry, Nervous system.

Boszormenyi, Zoltan, Burucs, Janos, and Nagy, Tibor.
FRENOLON AND PERPHENAZINE IN PSYCHIATRIC PRACTICE. 26 Dec 61, 13p. JPRS: 11642.
Order from OTS $0.50 62-11086

Trans. of Ideggyogyaszati Szemle (Hungary) 1961, v. 14, no. 8, p. 247-255.

DESCRIPTORS: Drugs, Therapy, *Mental diseases, Phenothiazine derivatives, Chlorpromazine, *Perphenazine, *Tranquilizing drugs.

Briks, Z. N.
EXPERIMENTAL INVESTIGATIONS OF THE TYPOLOGICAL CHARACTERISTICS OF THE HIGHER NERVOUS ACTIVITY IN SCHOOL AGE CHILDREN. [1961] [39]p. 20 refs.
Order from OTS or SLA $3.60 62-13791

Trans. of [Akademiya Nauk SSSR]. Institut Vysshei Nervnoi Deyatel'nosti. Trudy. [Seriya Patofiziologicheskaya] 1956, v. 2, p. 149-174.

DESCRIPTORS: *Nervous system, *Children, *Behavior.

From the experimental investigation of the higher nervous activity of 45 children of school age (8-11) characteristic complexes were demonstrated of the characteristics of equilibrium, mobility and strength of the nerve processes, which permitted dividing these

Ivanov-Smolenskii, A. G.
LINES OF DEVELOPMENT OF EXPERIMENTAL INVESTIGATION OF THE WORK AND INTERACTION OF THE FIRST AND SECOND SIGNAL SYSTEMS [Puti Razvitiya Experimental'nogo Issledovaniya Raboty i Vzaimodeistviya Pervoi Vtoroi Signal'nykh Sistem]. [1961] 40p. [9 tables omitted] 6 refs. [NIH] 136.
Order from OTS or SLA $3.60 62-15326

Trans. of [Akademiya Nauk SSSR]. Institut Vysshei Nervnoi Deyatel'nosti. Trudy. [Seriya Patofiziologicheskaya] 1956, v. 2, p. 3-20.
Another trans. is available from OTS $4.00 in 60-21085, 1960 [405]p.

DESCRIPTORS: *Brain, *Nervous system, Physiology, Pathology, Children

Ivanov-Smolenskii, A. G.
WAYS AND PERSPECTIVES OF THE DEVELOPMENT OF THE PHYSIOLOGY AND PATHOPHYSIOLOGY OF THE HIGHER NERVOUS ACTIVITY OF THE CHILD. [1961] [15]p. 9 refs.
Order from OTS or SLA $1.60 62-13792

Trans. of [Akademiya Nauk SSSR]. Institut Vysshei Nervnoi Deyatel'nosti. Trudy. [Seriya Patofiziologicheskaya] 1956, v. 2, p. 335-346.

DESCRIPTORS: *Nervous system, *Children, Physiology, Pathology, Brain

Introductory report at the scientific conference held at the Institute of Higher Nervous Activity of the Academy of Sciences of the USSR, May 24-26, 1956, Moscow, devoted to problems of physiology and pathophysiology of the higher nervous activity of the child.

Saparina, E.
BLANK SPOTS ON THE MAP OF THE BRAIN.
1 Dec 61 [11]p. JPRS: 11388.
Order from OTS or SLA $1.60 62-13683

Trans. of Znanie-Sila (USSR) 1961, v. 36, no. 1, p. 10-13.

DESCRIPTORS: *Neurology, *Cybernetics, Brain, *Memory, *Bioelectronics, Stimulation, Conditioned reflex, Cerebral cortex.

Pathology

CLINICAL MEDICINE, 1961, VOL. 39, NO. 7: [SELECTED ARTICLES]. 22 Nov 61 [29]p. 36 refs. JPRS: 11196.
Order from OTS or SLA $2.60 62-13647

Trans. of Klinicheskaya Meditsina (USSR) 1961, v. 39, no. 7, p. 3-5 and 110-124.

DESCRIPTORS: *Space medicine, *Heart, Diseases, Valves, Constriction, *Electrocardiography, *Diagnosis, Blood circulation, Lungs, *Congenital anomalies.

Contents:
A great event in science and the history of mankind: the first flight of man into space (certain clinico-physiological problems in the flight of man into space
The clinical significance of electrokymography in the diagnosis of tricuspid stenosis, by Yu. I. Akimov and L. L. Orlov
The role of electrokymography in the diagnosis of hemodynamic changes in pulmonary circulation during certain congenital diseases of the heart, by K. A. Kosharko.

MEDICAL CONFERENCES IN THE USSR. 18 Oct 61 [36]p. JPRS: 10587.
Order from OTS or SLA $3.60 62-13049

Trans. of [Zdravookhranenie Sovetskoi Estonii] (USSR) 1960, no. 6, p. 65-79.

DESCRIPTORS: *Conferences, *Medicine, Nutrition, Recreation, Physical fitness, Therapy, Corticosteroids Rheumatic fever, Poliomyelitis, Parasitology, Tumors, Industrial medicine, Hospitals, Medical personnel, Labor.

Contents:
Conference on nutrition in Moscow and Leningrad, by E. Vagane
Republic Scientific-practical Conference on Sports Medicine and Therapeutic Physical Culture (no. 3) by F. Markusas
Republic Scientific-practical Conference on Therapeutists (no. 2) by A. Gunter
Conference in Leningrad on corticosteroid hormones, by L. Marden and N. Elstein
The rheumatology conference in Vilnius, by L. Pai
International congress in Moscow on the live poliomyelitis vaccine, by T. Kuslap
Conference on parasitology in Riga, by G. Kondrat'eva and G. Medinskii
All-Union Conference of Oncologists, by I. Beltsikov
50th anniversary of J. Rochlin, by H. Roots
Care of the health of workers, by A. Sarap
Ordinance to improve the ambulatory-polyclinical help, by A. Sarap
On the conversion to a shorter work day in the system of the Health Ministry of the Estonian SSR, by H. Roots
Meeting of the Union for Medical Workers (no. 3) by H. Pihl.

PATHOLOGICAL PHYSIOLOGY AND EXPERIMENTAL THERAPY, 1961, VOL. 5, NO. 3: SELECTED ARTICLES. 26 Jan 62 [20]p. (1 ref. omitted) 23 refs. JPRS: 12217.
Order from OTS or SLA $1.60 62-15786

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1961, v. 5, no. 3, p. 54-59, 72-74, 84-85.

Portions of this report will not reproduce well.

DESCRIPTORS: Colloids, *Osmotic pressure, *Blood volume, Hemorrhage, Blood proteins, *Dextran, *Hypertension, Drugs, *Radiation sickness, *Carbonic anhydrase, Blood, Sensitivity, Anesthetics, *Burns.

Contents:
The restoration of colloido-osmotic pressure, blood volume and serum proteins after blood loss and poligyukin injection, by V. B. Koziner
Concerning the methods of inducing experimental hypertension, by G. A. Ionkin and M. V. Pan'shina
Change in the reserve alkalinity and activity of the carbonic anhydrase of the blood in acute radiation disease, by K. V. Ivanov and A. I. Dmitriev
Change in sensitivity to various anesthetics after burn trauma, by V. A. Konstantinov.

PROCEEDINGS OF THE MEETING OF THE SCIENTIFIC SOCIETY OF ONCOLOGISTS OF LENINGRAD AND LENINGRAD PROVINCE (NO. 49) 7 APRIL 1960, tr. by L. Summerfield. [1961] 10p.
Order from OTS or SLA $1.10 62-13981

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 110-113.

DESCRIPTORS: *Medical personnel, Medical research, *Tumors.

PUBLIC HEALTH IN EAST GERMANY AND CZECHOSLOVAKIA: SELECTED TRANSLATIONS. 13 Mar 61 [6]p. JPRS: 4447.
Order from OTS or SLA $1.10 62-19715

Partial trans. (summaries only) of Deutsche Gesundheitswesen (East Germany) 1960, v. 15, no. 49/50, p. 2387, 2419, 2434.

DESCRIPTORS: Public health, Literature, Germany, Czechoslovakia, *Toxoplasmosis, *Pneumonia, *Parasitic infections, *Disease carriers, Children, Diseases, *Anthrax, Lungs, *Tuberculosis, *Chemotherapeutic agents, Aerosols.

Contents:
Toxoplasmosis and pneumocystosis as an anthropozoonosis, by Otto Jirovec
Anthrax as a children's disease, by R. Maschke
Chemotherapy of tuberculosis of the lungs with ultraschall aerosols, by A. Schmiedel and others.

RECENT NEWS IN SOVIET MEDICINE. 20 Dec 61 [36]p. 32 refs. JPRS: 11744.
Order from OTS or SLA $3.60 62-15361

Trans. of Sovetskaya Meditsina (USSR) 1961 [v. 25] no. 6, p. 3-13 and 55-66.

DESCRIPTORS: *Medicine, *Heart, Pathology, Surgery, Resuscitation, Traumatic shock, Therapy, Intravenous injections, Blood transfusions, Rheumatic fever, Antigens, Antibodies, Inflammation, Serum, *Blood proteins, Diagnosis

Contents:
The problem of heart massage, by B. V. Petrovskii and V. S. Ryshkin
Terminal conditions and their treatment, by V. A. Negovskii
The problem of autoantibody formation in rheumatic fever (preliminary report) by I. N. Nesyn
C-reactive protein as an index of the inflammatory process activity in some diseases, by P. M. Pashinin

SOVIET MEDICINE, 1961, NO. 8: SELECTED ARTICLES. 15 Jan 62 [75]p. 141 refs. JPRS: 11941.
Order from OTS or SLA $7.60 62-15492

Trans. of Sovetskaya Meditsina (USSR) 1961) [v. 25] no. 8, p. 29-33, 63-76, 86-95, 123-127, 129-131.

DESCRIPTORS: *Blood coagulation, Bibliography, Heart, *Angina pectoris, *Transaminases, Electrophoresis, *Blood proteins, Children, *Nephritis, Diseases, *Anesthesia, Gases, Oxygen, *Muscle relaxants, Surgical trauma, *Cancer, Diagnosis, Water

Contents:
Changes in the functional condition of the blood coagulation system during the development and course of a myocardial infarct, by V. N. Malyarovkii
The clinical importance of determining the blood serum aminopherase in coronary insufficiency, by M. I. Sidorenkov
Changes in the electrophoretic profile of blood serum proteins in children with acute nephritis, by V. I. Verbitskii
Electrophoretic study of blood serum proteins and lipoproteins in dysentery, by S. D. Polozhentsev
The role of meteorological factors in the reactivity of a sick organism (survey of literature) by D. E. Yankelevich
Superficial potentiated gas anesthesia with continuous curarization in traumatic surgical interventions, by B. A. Polyanskii and others
The problem of detection and treatment of precancerous conditions of the uterine cervix under conditions of a pelotherapeutic health resort, by I. A. Brusilovkii and others.

THERAPEUTIC ARCHIVES, 1961, VOL. 33, NO. 7: SELECTED ARTICLES. 21 Dec 61 [99]p. 82 refs. JPRS: 11625.
Order from OTS or SLA $8.60 62-13857

Trans. of Terapevticheskii Archiv (USSR) 1961, v. 33, no. 7, p. 3-9, 35-38, 46-53, 58-67, 91-99, 110-113, 123-126.

DESCRIPTORS: *Heart, *Blood circulation, *Thrombosis, Pathology, *Brain, *Blood proteins, Hypertension, Vasomotor drugs, Lipids, Blood, Rheumatism, Asthma, Pneumonia, Lysozymes, Enzymes, Leukemia, Carbohydrates, Metabolism, *Myleran, ACTH, Lymphocytes, Solar energy.

Contents:
The post-infaction syndrome, by A. M. Damir and S. Kh. Sidorovich
The problem of combined disturbances of cerebral and coronary circulation, by V. D. Troshin
The dynamics of protein fractions of the blood serum in the treatment of hypertensive disease with alkaloid preparations of Rauwolfia Serpentins and Hexonium, by G. V. Kalugina
Changes in protein and lipid fractions of the blood serum in young hypertensive disease patients, by V. V. Volkova
Changes in protein fractions of the blood serum in rheumatism, by Yu. A. Goryaev
Treatment of bronchial asthma and chronic nonspecific pneumonia patients with proteolytic enzymes, by D. M. Zlydnikov
Protein composition of the blood serum in leukemia patients, by A. A. Rakityanskaya and Z. N. Atrakhovich
Changes in carbohydrate and lipoid metabolism in chronic myelosis patients under the effect of myelosan and ACTH therapy, by I. A. Gorelov and B. I. Lipkovich
Relative lymphocytosis and solar activity, by N. A. Schul'ts
The role of trauma in the development of primary cancer of the liver, by Vasil G. Yanchev and Vo Van Vinh
Doctors' and candidates' dissertations: Dissertations approved by the supreme certification commission in Mar-Apr 61, by I. N. Fedorova.

An, Shih, Chang, Hsiao-lou and others.
PRELIMINARY REPORT ON THE USE OF ULTRASONICS IN CLINICAL DIAGNOSIS [AND] OBSERVATION ON HUMAN INFECTION WITH CULTURED TRACHOMA VIRUS. 27 Nov 61, 40p. 25 refs.
JPRS: 11342.
Order from OTS $1.25 62-11079

Trans. of Chung Hua I Hsüeh Tsa Chih (Chinese People's Republic) 1960, v. 46, no. 1, p. 25-32 and 48-55.

DESCRIPTORS: *Ultrasonic equipment, *Diagnosis, Pathology, Stomach, Embryos, Liver, Uterus, Mammary glands, *Trachoma, Etiology, *Viruses, Identification.

Preliminary analysis was made of the exploration made of 738 cases of normal and diseased stomachs, pregnancy, staphloma fetus, the breast, the liver, and the cervix uteri, by means of an ultrasonic device of the pulse best reflection type. (An et al.) For the purpose of solving the problem of whether the virus isolated from the trachomatous patients by us in the past several years was also a trachoma virus, we performed human experiment in two years was also a trachoma virus, we performed human experiment in two volunteers in 1958. In one case, a relatively recent strain, Tung-jen 16, was used as infective agent; in the other case, a strain, TE 106, which was isolated eighteen months before the innoculation was used. (Chang et al.)

Andjelovski, Andjelko.
YUGOSLAV RESEARCH ON PSITTACOSIS-ORNITHOSIS. 12 June 61 [4]p. JPRS: 4690.
Order from OTS or SLA $1.10 62-19427

Trans. of Galenika (Yugoslavia) 1960, v. 7, no. 1, p. 21-22.

DESCRIPTORS: Birds, Virus diseases, Pathology, *Virus pneumonia, Therapy, Antibiotics, Tetracyclines, Chloromycetin.

Anichkov, N. N.
PRESENT STATUS OF THE PROBLEM OF EXPERIMENTAL ATHEROSCLEROSIS (Sovremennoe Sostoyanie Voprosa ob Eksperimental'nom Ateroskleroze) tr. by B. F. Toms. [1961] 26p. 86 refs. [NIH]-26.
Order from OTS or SLA $2.60 62-15147

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1956, v. 11, no. 2, p. 13-24.

DESCRIPTORS: *Arteriosclerosis. Arteries, Age, Hypertension.

Averbakh, M. M. and Shadrin, V. P.
TUBERCULOMAS OF THE LUNGS (Tuberkulomy Legkikh) tr. by B. Haigh. [1961] 19p. 83 refs.
NIH no. 119.
Order from OTS or SLA $1.60 62-15732

Trans. of Sovremennye Problemy Tuberkuleza (USSR) 1956, v. 7, no. 1, p. 3-10.

DESCRIPTORS: *Lungs, *Tuberculosis, *Pulmonary tuberculosis.

Bartha, Ferenc.
FIFTEEN YEARS OF HIGHER AND SECONDARY EDUCATION IN HEALTH AFFAIRS. 30 Jan 62 [13]p.
JPRS: 4362.
Order from OTS or SLA $1.60 62-19333

Trans. of Nepegeszsegugy (Hungary) 1960, v. 41, no. 4, p. 102-108.

DESCRIPTORS: *Medical personnel, *Education, Universities, Training, *Public health.

Benigar, Joze.
SOME BASIC PRINCIPLES OF THE NEW YUGOSLAV CODE OF HEALTH PROTECTION AND ORGANIZATION OF THE HEALTH SERVICE. 8 Jan 62 [10]p.
JPRS: 11852.
Order from OTS or SLA $1.10 62-19599

Trans. of Zdravstveni Vestnik (Yugoslavia) 1961, no. 3/4, p. 49-52.

DESCRIPTORS: *Public health, *Preventive medicine, Medical personnel, Health insurance, Yugoslavia.

Bogdanov, V. A.
GASTROSCOPY UNDER ANAESTHESIA FOR THE DIAGNOSIS OF GASTRIC CANCER, tr. by L. Summerfield. [1961] 15p. (3 figs. omitted) 6 refs.
Order from OTS or SLA $1.60 62-13962

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 12-17.

DESCRIPTORS: *Stomach, Medical examination, Diagnosis, *Cancer, *Medical equipment.

Borodin, V. P.
STUDY OF EFFECTIVENESS OF ANTITULAREMIA VACCINATION IN ZONE OF CONSTRUCTION OF STALINGRAD HYDROELECTRIC STATION (Izuchenie Effektivnosti Protivotulyaremiinoi Vaktsinatsii v Zone Stroitel'stva Stalingradskogo Gidrouzla). 1960 [11]p.
10 refs. RSTP T-17-60.
Order from OTS or SLA $1.60 62-15088

Trans. of mono. Voprosy Epidemiologii i Profilaktiki Tulyaremii (Problems of Epidemiology and Prophylaxis of Tularemya) Moscow, 1958, p. 152-155.

DESCRIPTORS: Tularemia, *Tularemia vaccine, Effectiveness, Therapy

Study of the epidemiologic efficacy of the tularemia Gayskiy-El'bert vaccine, during a period of an already developed outbreak of arthropod-borne tularemia, showed that the morbidity rate among those vaccinated may be reduced 20 times as compared with an unvaccinated group. Among vaccinated persons cases occurred up to 10 days after the inoculation; however, three persons fell ill a month after the inoculation. The cases were usually mold. For the purpose of complete epidemiologic protection vaccination against tularemia must be carried out in 100 percent of the susceptible population. Subsequent, planned, and more extensive

coverage of the population reduced the tularemia morbidity to solitary cases; and no cases of tularemia have been seen in the regions of the Volga-Akhtubinsk River Valley in 1951-1957 period. (Author)

Boyarshinova, M. S. and Solov'eva, V. A.
17-KETOSTEROIDS AND THEIR CLINICAL SIGNIFICANCE IN TUBERCULOSIS (17-Ketosteroidy i Ikh Znachenie v Klinike Tuberkuleza) tr. by R. A. Hetherton. [1961] 13p. 47 refs. [NIH] no. 45.
Order from OTS or SLA $1.60 62-15731

Trans. of Sovremennye Problemy Tuberkuleza (USSR) 1955, v. 6, [no. 1] p. 3-8.

DESCRIPTORS: *Tuberculosis, *Steroids.

Bredikis, Yu. I. and Kazakevichus, P. P.
A PORTABLE CARDIAC ELECTROSTIMULATOR. 9 Nov 61 [5]p. JPRS: 10991.
Order from OTS or SLA $1.10 62-13370

Trans. of Vestnik Khirurgii (USSR) 1961 [v. 86] no. 7, p. 110-111.

DESCRIPTORS: *Heart, *Stimulation, Electrical equipment, *Medical equipment, Instrumentation, Mobile, Storage batteries, Surgery.

Büchner, M.
OSCILLOGRAPHIC POLAROGRAPHY, A METHOD OF ULTRAMICROANALYSIS IN THE CLINICAL LABORATORY. 27 Dec 61, 7p. JPRS: 11660.
Order from OTS $0.50 62-11088

Trans. of Deutsche Gesundheitswesen (East Germany) 1961, v. 16, no. 36, p. 1671-1673.

DESCRIPTORS: *Medical equipment, Diagnosis, Electron microscopy, Blood, Analysis, *Oscillographs, *Polarographic analysis.

Buyanovskaya, R. S.
INTER-ATTACK PERIODS OF RHEUMATISM IN CHILDREN AND ITS SANITARY-HEALTH RESORT TREATMENT: CONCLUSION. 29 Jan 62 [5]p. JPRS: 12296.
Order from OTS or SLA $1.10 62-15769

Trans. of mono. Vnepristupnyi Period Revmatizma u Detei i Ego Sanatorno-Kurortnoe Lechenie, Moscow, 1960, p. 229-232.

DESCRIPTORS: *Rheumatic fever, Therapy, Inhibition, Diagnosis, Healing, Children

Chou, Shou-ch'i.
BACILLARY DYSENTERY: SUMMARY OF THE ALL-CHINA ACUTE EPIDEMIOLOGY CONFERENCE IN 1959. 24 Oct 61 [17]p. JPRS: 10779.
Order from OTS or SLA $1.60 62-13220

Trans. of Chung Hua i Hsüeh Tsa Chih (Chinese People's Republic) 1960, v. 46, no. 1, p. 75-79.

DESCRIPTORS: *Conferences, *Shigella infections, *Epidemiology, China, Drugs, Chinese traditional medicine.

Ciofu, S.
CONCEPTS AND METHODS OF RESEARCH IN SOVIET ONCOLOGY (Conceptii si Metode Actuale de Cercetare in Oncologia Sovietica). 31 July 61 [11]p. JPRS: 9824.
Order from OTS or SLA $1.60 62-23263

Trans. of Medicina Interna (Rumania) 1961, v. 13, no. 2, p. 161-166.

DESCRIPTORS: *Medical research, *Cancer, Etiology, Diagnosis, Drugs.

Dolgov, A. P. and Solov'eva, L. V.
SKIN DISEASES CAUSED BY THE EFFECT OF PHYSICAL FACTORS, ARTIFICIAL DERMATOSES. 12 Jan 62 [26]p. JPRS: 11940.
Order from OTS or SLA $2.60 62-15504

Trans. of mono. Vrachebno-Trudovaya Ekspertiza Zabolevanii Kozhi (Medical Labor Expertise of Skin Diseases) Moscow, 1961, chap. 3, p. 111-141.

DESCRIPTORS: *Skin, *Diseases, *Industrial medicine, Radiation hazards, Etiology, Temperature, Pressure, Sunburn, Particles, Minerals, Atmosphere.

Skin diseases originating as the result of mechanical factors, physical agents, and radiation energy are discussed.

Drabov, V.
MOSCOW OBLAST SCIENTIFIC RESEARCH CLINICAL INSTITUTE IMENI M. F. VLADIMIRSKII (MONIKI) 20 Dec 61 [6]p. 3 refs. JPRS: 11746.
Order from OTS or SLA $1.10 62-15234

Trans. of Bol'shaya Meditsinskaya Entsiklopediya (USSR) 1961, 2d ed, v. 19, p. 99-103.

DESCRIPTORS: Medical research, *Medical personnel, Training, *Public health, Hospitals, *Rural areas.

Moscow Oblast Scientific Research Institute was organized in 1923.

Drozhevkina, M. S. and Puchkova, T. I.
METHODS OF ACCELERATING THE BACTERIOLOGICAL DIAGNOSIS OF TULAREMIA (Metody Uskoreniya Bakteriologicheskoi Diagnostiki Tulyaremii. Soobshchenie I. Sovershenstvovanie Biologicheskogo Metoda Issledovaniya). Communication 1 on Improvement of the Biological Method of Investigation. [1961] [23]p. 13 refs.
Order from OTS or SLA $2.60 62-15000

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii] Protivochumnyi Institut. Trudy (USSR) 1956 [v. 10] p. 167-186.

DESCRIPTORS: Diagnosis, Acceleration, *Tularemia, Bacteria, Microbiology.

Experience attests to the expediency of dissecting and investigating the animals used as a biological test 1 to 2 days after being infected. This makes it possible to accelerate considerably the isolation of pure culture of the causal organism of tularemia. In making reliable diagnoses which require speed: the increase of the number of animals (biological test) used for infection and dissection of them 6 to 12 hours after infection may be recommended. The advantage of setting up the biological test on white mice rather than on guinea pigs was confirmed. Liquid yolk medium leads to more rapid isolation of cultures than curdled yolk medium. In order to accelerate the isolation of cultures the investigation of punctate from the site of infection and regional lymph node of the still alive biological test animal beginning with the first day after infection is recommended.

Drozhevkina, M. S., Kharitonova, T. I. and Uraleva, V. S.
PHAGO-THERAPY IN EXPERIMENTAL BRUCELLOSIS (Fagoterapiya Eksperimental'nogo Brutselleza (Predvaritel'noe Soobshchenie)). Preliminary Communication. [1961] [25]p. 25 refs.
Order from OTS or SLA $2.60 62-15007

Trans. of [Gosudarstvennyi Nauchno-Issledovatel'skii] Protivochumnyi Institut. Trudy (USSR) 1956 [v. 10] p. 413-431.

DESCRIPTORS: *Brucellosis, Bacteriophages, Therapy.

The introduction of bacteriophage in rabbits and guinea pigs sick with brucellosis led to their disallergization, more rapid increase of agglutination titers, increase of physiological reactivity of the organism and acceleration of the process of their freedom from the causal organism of infection. The mechanism of action of bacteriophage in the organism of an animal infected with brucellosis is determined by the total influence of the weak specific irritant on the nervous system, which leads to the activation of the natural defense mechanisms in the fight with the infection. Sterilization of an organism infected with brucellosis, which sets in with the introduction of specific bacteriophage, is the consequence of reflex increase of the resistibility of the organism, and is also possibly a change of the causal organism itself under the influence of bacteriophage. Phago-therapy must be conducted in persistent repeated courses. It is necessary to change the dose and duration of introducing bacteriophage depending on the stage of the infection process in which treatment is begun. (Author)

Egri, Laszlo.
NEWER POSSIBILITIES OF ATTENUATING THE HARMFUL CONSEQUENCES OF NICOTINE. 1962.
Order from K-H $10.00 K-H 10897-a

Trans. of Rev[ue] Intern[ational des] Tabac[s] (France) 1961, v. 335, p. 4, 5, 23.

DESCRIPTORS: *Nicotine, Toxicity, Attenuation, *Tobacco, *Smokes.

Ejrup, [B.]
AN ATTEMPT TO BREAK THE TOBACCO HABIT BY MEANS OF INJECTION TREATMENT. 1962, 33p.
Order from K-H $4.25 K-H-5668-c

Trans. of Svenska Läkartidningen [1956] v. 53, p. 2634-2653.

DESCRIPTORS: *Tobacco, Drugs, *Injection, Therapy, *Smokes, Inhibition.

Ejrup, B.
FOLLOW-UP OF A MATERIAL OF DIFFICULTLY TREATED SMOKERS. 1962, 13p.
Order from K-H $17.25 K-H 9513

Trans. of Svenska Läk[ar]tidningen [1959] v. 56, no. 33, p. 2254-2262.

DESCRIPTORS: *Smokes, *Tobacco, Therapy.

Ejrup, B.
PERIPHERAL ARTERIAL CIRCULATION DISORDERS: DIAGNOSIS AND TREATMENT. 1962, 27p.
Order from K-H $33.75 K-H 8003-b

Trans. of Svenska Läkartidningen, 1948, v. 45, 2 Jan, p. 1-17.

DESCRIPTORS: *Arteries, *Circulatory system, Diseases, Diagnosis, Therapy.

Elanskii, N. N.
THE PATHOGENESIS AND TREATMENT OF CARDIOSPASM (K Voprosu o Patogeneze i Lechenii Kardiospazma) tr. by B. Haigh. [1961] 15p. (3 figs. omitted) 20 refs. [NIH]-30.
Order from OTS or SLA $1.60 62-15145

Trans. of Khirurgiya (USSR) 1956, v. 32, no. 4, p. 33-41.

DESCRIPTORS: *Heart, Diseases, Therapy, *Spasms, Pathology.

Elfimova, A. I. and Khakhina, Z. D.
MUTABILITY OF THE PLAGUE BACILLUS (Izmenchivost' Chumnogo Mikroba). [1961] [21]p.
Order from OTS or SLA $2.60 62-13999

Trans. of Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956, v. 10, p. 125-141.

DESCRIPTORS: *Plague, Bacteria, Infections, Tissue culture, Culture media, Mutations, Immunization, Biochemistry, Mice, Microorganisms.

Conclusions: The cultivation of virulent plague strains at a temperature of 37° on Martin agar $_{p}$H 6.9 with daily disseminations is a method of directed mutation of certain properties of the plague microbe. The method made it possible in from 4 to 11 months to obtain avirulent and harmless strains from all the

virulent cultures. Passage of the modified strains through white mice (in the given case the organs of animals previously infected with a huge dose of the culture served as the material for the passages) and through guinea pigs (in this case cultures of modified strains isolated in the animals of the previous passages served as the material for the passages) do not bring about the return of the lost virulence. The immunogenicity of the modified strains in comparison with the vaccinal strain EV depends on the species of the immunized animals and on the size of the immunizing dose. (Author)

Enescu, Viorica.
SPIROGASOMETRIC INVESTIGATIONS IN PULMONARY SCLEROSES CAUSED BY SMOKING TOBACCO. I. 1962, 25p.
Order from K-H $31.25 K-H 5497-b

Trans. of Probleme de Terapeutica (Rumania) 1955, v. 2, p. 83-108.

DESCRIPTORS: *Smokes, *Tobacco, *Lungs, Pathology, Diseases.

Epshtein, P. V.
THE SIGNIFICANCE OF ENDOCRINO-METABOLIC DISORDERS IN THE DIAGNOSIS, PROGNOSIS AND THERAPY OF TUMORS OF THE PITUITARY (Znachenie Endokrinno-Obmennykh Rasstroistv v Diagnostike, Prognoze, i Terapii Opukholei Gipofiza) tr. by J. J. Oliver. [1961] 18p. 15 refs. [NIH]-87.
Order from OTS or SLA $1.60 62-15129

Trans. of Voprosy Neirokhirurgii (USSR) 1956, v. 20, no. 5, p. 49-55.

DESCRIPTORS: *Pituitary gland, *Tumors, Diagnosis, Therapy, Endocrine glands, Metabolism, Cancer.

Ermala, P. and Holsti, L. R.
TOBACCO AND CANCER. 1962, 18p.
Order from K-H $22.50 K-H 3869-b

Trans. of Duodecim (Finland) 1955, v. 71, p. 733-747.

DESCRIPTORS: *Tobacco, *Neoplasms, *Cancer.

Eschle, K.
FILTERING AND PORE RATIOS IN CIGARETTE FILTERS. 1962, 9p.
Order from K-H $11.25 K-H 10402-c

Trans. of Mitteilungen aus dem Gebiete der Lebensmitteluntersuchungen und Hygiene (Switzerland) 1960, v. 51, p. 69-74.

DESCRIPTORS: *Tobacco, *Cigarettes, *Particulate filters, Parosity.

Essenberg, J. M.
"THE DIVINE HERB" CLINICAL AND EXPERIMENTAL ASPECTS OF THE TOBACCO PROBLEM. 1962, 19p.
Order from K-H $23.75 K-H-5538-b

Trans. of Resenha Clinico-Cientifica (Brazil) 1956, v. 25, no. 2, p. 35-40.

DESCRIPTORS: *Tobacco, Medical research, *Smokes.

Evseenko, L. S.
CHANGES IN THE URINARY SYSTEM IN CARCINOMA OF THE UTERINE CERVIX (Izmeneniya v Mochevoi Sisteme pri Rake Sheiki Matki). 1960, 7p. RSTP Ab-1595-60.
Order from OTS or SLA $1.10 62-15073

Trans. of Vrachebnoe Delo (USSR) 1957, no. 6, p. 619-622.

DESCRIPTORS: *Urinary tract, *Uterus, *Neoplasms, Cancer research

Fachini, Guiseppe.
PROCESS FOR TREATING TOBACCO AND CIGARETTE PAPER WITH THE AIM OF NEUTRALIZING COMPLETELY OR IN PART THE TOXIC EFFECTS OF THE TOBACCO AND OF THE PAPER THUS TREATED. 1962.
Order from K-H $5.00 K-H 10934-a

Trans. of Italian patent for Industrial Invention 530211, cl. 25 [appl. 3 Mar 54, granted 6 July 55, printed Jan 58].

DESCRIPTORS: *Paper, *Tobacco, *Cigarettes, Toxicity, Neutralization.

Favilli, Giovanni.
THE ETIOLOGICAL PROBLEM OF MALIGNANT LUNG TUMORS IN RELATION TO TOBACCO. 1962, 18p.
Order from K-H $22.50 K-H-5062-a

Trans. of Resenha Clinico-Cientifica (Brazil) 1955, v. 24, no. 7, p. 179-183.

DESCRIPTORS: *Tobacco, *Neoplasms, *Lungs, Etiology, *Cancer, *Tumors.

Fedorchuk, E. S.
PARTICIPATION OF REFLEX MECHANISMS IN THE ACTION OF NICOTINE ON BLOOD PRESSURE. 1962, 8p.
Order from K-H $10.00 K-H 3374-a

Trans. of Byull[eten'] Eksp[erimental'noi] Biol[ogii] i Med[itsiny] (USSR) 1954, v. 37, no. 6, p. 7-11.

DESCRIPTORS: *Blood pressure, *Nicotine, Conditioned reflex, *Tobacco.

Feiks, F. K.
ANAMNESIS OF THE BRONCHOGENIC CARCINOMA PATIENT. 1962, 23p.
Order from K-H $28.75 K-H 8003-c

Trans. of der Krebsarzt (Austria) 1957, v. 12, no. 4, p. 208-219.

DESCRIPTORS: *Neoplasms, *Bronchiectasis, *Lungs, *Cancer.

Fen'veshi, Tomash.
THE EFFECT OF TOBACCO SMOKING ON THE CARDIOVASCULAR SYSTEM. 1962, 18p.
Order from K-H $22.50 K-H 9874-b

Trans. of Klin[icheskaya] Med[itsina] (USSR) 1959, v. 37 [no. 7] p. 7-11.

DESCRIPTORS: *Tobacco, *Smokes, Circulatory system.

Feofilov, G. L.
DATA ON THE PATHOGENESIS OF CANCER OF THE LUNG. 1962. 10p.
Order from K-H $12.50 K-H 8921-a

Trans. of Khirurgiya (USSR) 1958, v. 34, no. 3, p. 66-71.

DESCRIPTORS: *Lungs, *Neoplasms, Reproduction, Cancer research.

Fernanders, M. C.
A CONTRIBUTION TO THE STUDY OF CANCER ETIOLOGY. 1962, 13p.
Order from K-H $16.25 K-H 5069-a

Trans. of Brasil-Medico, 1954, v. 68, no. 14/17, p. 11-18.

DESCRIPTORS: *Neoplasms, Etiology, Cancer research, *Cancer.

Figari, Antelio.
BRONCHOPULMONARY CARCINOMA. 1962, 34p.
Order from K-H $42.50 K-H 8664

Trans. of Bollettino di Oncologia (Italy) 1957, v. 31, no. 5, p. 649-674.

DESCRIPTORS: *Neoplasms, *Cancer, *Lungs, *Bronchiectasis.

Fingerland, A.
SMOKING AND LUNG CANCER. 1962, 17p.
Order from K-H $21.25 K-H-10501

Trans. of Rozhledy v Tuberkulose a v Nemocech Plicnich (Czechoslovakia) 1960, v. 20, no. 6, p. 482-488.
DESCRIPTORS: *Smokes, *Tobacco, *Neoplasms, *Lungs, *Cancer.

Fiori, W.
ELECTROCARDIOGRAM OF THE RABBIT UNDER EXPERIMENTAL INTOXICATION BY NICOTINE. 1962, 8p.
Order from K-H $10.00 K-H 10607-a

Trans. from [Società Italiana di Biologia Sperimentale. Bollettino] 1960, v. 36, no. 12.

DESCRIPTORS: Rabbits, *Nicotine, *Electrocardiography, Medical research, Toxicity.

Fischer, Walther.
LUNG CANCER IN THE FEMALE SEX. 1962, 19p.
Order from K-H $23.75 K-H 5323

Trans. of Jena U. Wissenschaftliche Zeitschrift. Mathematisch-Naturwissenschaftliche Reihe (East Germany) 1954/55, no. 1, p. 21-26.

DESCRIPTORS: *Neoplasms, *Lungs, *Women, Cancer research, *Cancer.

Friedel, Wolfgang.
ON THE INFLUENCE OF AGE, SEX, BODY WEIGHT AND SIZE, NICOTINE CONSUMPTION AND TERM OF MENSTRUAL CYCLE ON FLUCTUATIONS IN BLOOD PRESSURE IN CHANGES OF POSITION. 1962, 26p.
Order from K-H $32.50 K-H 10281-c

Trans. of Deutsch[e] Gesundh[eitswesen] (East Germany) 1960, v. 15, p. 59-69.

DESCRIPTORS: *Women, Age, Sex, Body weight, *Nicotine, Consumption, *Gynecology, *Blood pressure

Gauze, G. F.
THE EFFECT OF ANTIBIOTICS ON THE GROWTH OF MALIGNANT TUMORS (O Vliyanii Antibiotikov na Rost Zlokachestvennykh Opukholoei). 4 Jan 62, 8p.
NIH no. 1-35-62.
Order from OTS or SLA $1.10 62-15799

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1954, no. 4, p. 29-34.

DESCRIPTORS: *Cancer research, *Antibiotics, Cancer, *Cells (Biology), Growth, *Inhibition, Metabolism, Yeasts.

Ginetsinskaya, T. A.
SOME NEW DATA ON THE MECHANISM OF PENETRATION AND MIGRATION OF CERCARIAE IN THE TISSUES OF THE HOST (Novye Dannye o Mekhanizme Proniknoveniya i Migratzii Tserkariev v Tkanyakh Khozyaina) tr. by Tatiana Boldyreff.
26 Dec 61, 8p. (3 figs. omitted) 5 refs.
Order from OTS or SLA $1.10 62-15371

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1950, v. 72, no. 2, p. 433-435.

DESCRIPTORS: *Worms, *Trematodes, Penetration, Tissues (Biology), Animals, *Hyaluronidase, Hyaluronic acid

Experiments established that the organism of cercariae contains a mucolytic ferment of hyaluronidase which destroys mucopolysaccharides (hyaluronic acid) in the multicellular animal membranes. The hyaluronidase of cercariae is an adaptation ferment and its secretion is greatly stimulated by adding some hyaluronic acid to the medium of the substratum of its effect. An essential factor in the mechanism of penetration of the cercariae through the animal membranes is the secretion of hyaluronidase which breaks their barrier function. Hyaluronidase, most probably, is produced by the glands of penetration in the cercariae. (Author)

Goldshtein, L. M., Olshanetskii, A. S., and Prokof'eva, E. I.
RESULTS OF TREATMENT OF OSTEOGENIC BONE SARCOMAS, tr. by L. Summerfield. [1961] [30]p. (7 tables, 3 figs. omitted) 33 refs.
Order from OTS or SLA $2.60 62-13967

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 38-52.

DESCRIPTORS: *Sarcoma, *Bone, Tumors, Neoplasms, Histology, Polymorphism, Therapy, Chemotherapeutic agents

Golovin, G. V.
THE LONG-LASTING FOLLOW-UP OF EXPERIMENTAL BONE CONSOLIDATION BY THE GLUE "OSTEOPLAST", tr. by Marten Majoros. Feb 60 [6]p. (figs. omitted) 5 refs. [NIH] 3-56-60.
Order from OTS or SLA $1.10 62-15296

Trans. of Vestnik Khirurgii (USSR) 1958, v. 81, no. 10, p. 67-71.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 60-14266, Feb 60 [6]p.

DESCRIPTORS: *Bone, Tissues (Biology), Transplantation.

Gordon, Yu. N.
BASIC PRINCIPLES OF ARTHRITIS CONTROL IN URBAN MEDICAL DISTRICTS. 16 Oct 61 [6]p. JPRS: 10470.
Order from OTS or SLA $1.10 62-13050

Trans. of Terapevticheskii Arkhiv (USSR) 1961, v. 33, no. 6., p. 95-96.

DESCRIPTORS: *Arthritis, *Rheumatism, *Urban areas, Countermeasures, *Drugs, Therapy, Pyrogens, Penicillin, Sensitivity.

Gorizontov, P. D.
PATHOLOGICAL PHYSIOLOGY IN THE USSR AND ITS MAIN ACHIEVEMENTS FOR FORTY YEARS (Patologicheskiya Fiziologiya v SSSR i Ee Osnovnye Dostizheniya za 40 Let). [1961] 38p. 154 refs. [RSTP] S-25.
Order from OTS or SLA $3.60 62-15083

Trans. of Arkhiv Patologii (USSR) 1957, v. 19, no. 10, p. 38-60.

DESCRIPTORS: *Pathology, Physiology, *Diseases, Medical research

Grabar, Pierre.
OBITUARY: PROFESSOR CHARLES OBERLING, tr. by L. Summerfield. [1961] 4p.
Order from OTS or SLA $1.10 62-13984

Trans. of #V[oprosy] O[nkologii] (USSR) 1960, v. 6, no. 11, p. 125-126.

DESCRIPTORS: *Medical personnel, Anatomy, Pathology.

Grigor'eva, A., Efimov, E. and others.
INTERNATIONAL FORUM OF PHYSICIANS IN TASHKENT (Mezhdunarodnyi Forum Medikov v Tashkente). 13 Dec 61 [16]p. JPRS: 11511.
Order from OTS or SLA $1.60 62-13669

Trans. from Pravda Vostoka (USSR) 1961, 6 Sep, p. 3.

DESCRIPTORS: *Medical personnel, Conferences, *Tropical diseases, Public health, *Parasitic infections, *Malaria.

Gubar', V. L.
THE HARMFUL ACTION OF ALCOHOL ON THE STOMACH (O Vrednom Deistvii Alkogolya na Zheludok) [1961] 11p. 13 refs.
Order from OTS or SLA $1.60 62-15343

Trans. of Voprosy Pitaniya (USSR) 1955, v. 14, no. 2, p. 3-8.

DESCRIPTORS: *Stomach, *Alcoholism

Ivenskaya, A. M.
CURRENT VIEWS ON ANTIBIOTIC TREATMENT FOR CHILDREN AND ADOLESCENTS IN THE EARLY PERIOD OF TUBERCULOUS INFECTION (Sovremennoe Sostoyanie Problemy Lecheniya Antibiotikami Detei i Podrostkov v Rannem Periode Tuberkuleznoi Infektsii) tr. by R. Crawford. [1961] [11]p. 36 refs. [NIH]-7.
Order from OTS or SLA $1.60 62-15155

Trans. of Probl[emy] Tuberk[uleza] (USSR) 1955, no. 4, p. 72-76.

DESCRIPTORS: *Antibiotics, Therapy, *Tuberculosis, Infections, Diseases, Therapy.

Ishkanov, V. I.
A LARGE FIBROLIPOMA OF THE STOMACH, tr. by L. Summerfield. [1961] [6]p. (2 figs. omitted) 8 refs.
Order from OTS or SLA $1.10 62-13974

Trans. of #Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 86-88.

DESCRIPTORS: *Stomach, *Tumors, Cancer.

Kacpzak, Marcin.
EVOLUTION OF VIEWS ON SCHOOL HYGIENE.
26 Jan 62 [7]p. JPRS: 12171.
Order from OTS or SLA $1.10 62-19581

Partial trans. (some parts summarized) of Pediatria Polska, 1960, v. 35, no. 8, p. 925-932.

DESCRIPTORS: *Children, *Preventive medicine, Medical personnel, *Public health.

Kadyseva, N. M.
BREPHOPLASTIC TRANSPLANTS OF THE ENDOCRINE GLANDS. [1961] [20]p. (4 figs. omitted) 21 refs. [NIH] no. Ab-159.
Order from OTS or SLA $1.60 62-15104

Trans. of Problemy Endokrinologii [i Gormonoterapii] (USSR) 1956, v. 2, no. 6, p. 90-98.

DESCRIPTORS: *Endocrine glands, *Transplantation, *Blood transfusions, Surgery.

In cases of pituitary dwarfism, there were obtained as a result of brephoplastic hypophyseal transplants a marked acceleration of growth and sexual development. In other cases only sexual development was obtained, without much growth in height. In a third instance only an insignificant increase in height was obtained. The brephoplastic transplants display an obvious superiority to transplantation with vessel-to-vessel suturing, both in the number of cases and the effectiveness of their action. Thyroidin should have preliminary employment before any therapeutic method, brephoplasty included. Blood transfusions, especially blood from pregnant women, aids growth and development of the organism because it carries hormones and plastic materials.

Kardzhiev, B. and Sivchev, S.
PRIMARY CANCER OF THE LIVER, tr. by E. F. Tourkoff. [1961] 2p.
Order from OTS or SLA $1.10 62-15299

Partial trans. of Arkhiv Patologii (USSR) 1956 [v. 18] no. 5, p. 69ff.

DESCRIPTORS: *Liver, *Neoplasms, Cancer research.

Khanin, M. N.
ETIOLOGY AND PATHOGENESIS OF TOXIC HEPATITIS WITH ASCITES, tr. by E. F. Tourkoff. [1961] 2p.
Order from OTS or SLA $1.10 62-15300

Partial trans. of Arkhiv Patologii (USSR) 1956,[v. 18] no. 6, p. 35ff.

DESCRIPTORS: *Hepatitis, Toxicity, *Ascites, Etiology, Pathology, Genetics

Klykov, I. A.
ORGANIZATION OF OBLAST (KRAI) THERAPEUTIC SERVICES (Organizatsionnoe Postroenie Terapevticheskoi Sluzhby v Oblasti (Krai)). [1961] 10p.
Order from OTS or SLA $1.10 62-15337

Trans. of Sovetskoe Zdravookhranenie (USSR) 1955, v. 14, no. 1, p. 20-24.

DESCRIPTORS: *Public health, Diseases, Diagnosis, Surgery, *Therapy, Medical laboratories

Kovanov, V.
THE FIRST MOSCOW MEDICAL INSTITUTE.
20 Dec 61 [8]p. 6 refs. JPRS: 11748.
Order from OTS or SLA $1.10 62-15206

Trans. of Bol'shaya Meditsinskaya Entsiklopediya (USSR) 1961, 2d ed, v. 19, p. 88-94.

DESCRIPTORS: *Universities, Public health, Medical personnel, *Medical research, Training, Hospitals.

This institute was established in 1764 as a medical faculty of the Moscow University and reorganized into a medical institute in 1930. At present, the institute consists of a medical department, a department for sanitation and hygiene and a pharmaceutical department. Recently, evening extension courses have been added.

Krasovskii, I. I. and Yakovlev, A. M.
A CASE OF PROLONGED REMISSION OF LYMPHOSARCOMATOSIS FOLLOWING SARCOLYSIN AND ROENTGEN THERAPY, tr. by L. Summerfield. [1961] [8]p. (4 figs. omitted) 5 refs.
Order from OTS or SLA $1.10] 62-13973

Trans. of Vopr[osy] Onkol[ogii] (USSR) 1960, v. 6, no. 11, p. 84-86.

DESCRIPTORS: *Hodgkins disease, X-rays, Therapy, Drugs, Dosage, Blood transfusions, Vitamins.

The sarcolysin was given orally in a dosage of 40 mg four times a week. The full course of treatment consisted of 160 mg sarcolysin, The drug was tolerated well by the patient and no side effects were observed. X-ray therapy was given concurrently with the sarcolysin administration. The treatment with X-rays and sarcolysin was conducted under strict control checking of the state of the blood. In addition, the patient received as part of the schedule of treatment a transfusion of blood once or twice per week, and also pentoxyl (5-oxy-methyl-4-methyl-uracil; leucopoietic stimulant-Transl.) and vitamin preparations. The patient improved rapidly. No signs of recurrence of the disease have occurred in 2 1/2 years. The inclusion of sarcolysin in the complex of treatment of patients with lymphosarcomatosis is recommended.

Kuimov, D. T. and Dubov, A. V.
AMYOTROPHIC LATERAL SCLEROSIS AS A SYNDROME OF TICK-BORNE ENCEPHALITIS. [1961] 9p. 6 refs. NAMRU Trans. 30(T30).
Order from OTS or SLA $1.10 62-13928

Trans. of Zh[urnal] Nevropatologii [i] Psikhiatrii (USSR) 1958, v. 58, no. 3, p. 282-287.

DESCRIPTORS: *Amyotrophic lateral sclerosis, *Encephalitis, Ticks, Nervous system, Diseases, Muscles, Spinal cord.

The authors report their observations regarding 10 patients with spring-summer encephalitis. The observations were made at the Neurological Diseases Clinic of the Novosibirsk Medical Institute. These patients exhibited a characteristic picture (syndrome) of amyotrophic lateral scelerosis several months after the start of the disease (infection). These were the poliomyelitic forms of spring-summer encephalitis. Attention is called to the fact that the spring-summer encephalitis did not always have an acute period after which the syndrome of amyotrophic scelerosis developed in several months. Almost half of the patients under study who had been infected did not have a manifest acute period, and the a. l. s. syndrome developed without an acute phase of spring-summer encephalitis. The transformation of the poliomyelitic form of spring-summer encephalitis into the a. l. s. syndrome has been observed relatively often. This has also been observed (in isolated cases, to be sure) in some other infectious diseases (brucellosis, malaria, syphilis). All these facts raise the question of the nosologic independence of the a. l. s. syndrome. The authors consider it most logical to regard the a. l. s. syndrome as a syndrome that accompanies other neuroinfections, among which spring summer encephalitis should be assigned a major place. (Author)

Lebedev, V. N.
THE QUESTION OF RECOVERY FROM ANTHRAX INFECTION OF THE INTESTINES. [10]p. 17 refs. JPRS: 10782.
Order from OTS or SLA $1.10 62-13270

Trans. from Sovetskaya Meditsina (USSR) 1961, v. 25, no. 7.

DESCRIPTORS: *Anthrax, Infections, *Intestine, Therapy, *Drugs, Penicillin, Arsenic compounds, Hydrides, Antibodies, Chloromycetin.

Conclusions: Recovery from anthrax infection of the intestines is possible, but only under the condition of early specific treatment with massive doses of anti-anthrax serum, antibiotics and novarsenol. For the timely recognition of anthrax in human beings and early administration of specific curatives, it is necessary to place all persons who have had contact with anthrax-infected animals under daily medical observation for a period of not less than eight days. A careful epidemiological anamnesis is also necessary. Prophylactic injection of anti-anthrax serum into patients in the incubation period does not always head off the disease, but it possibly exerts an influence on the more favorable outcome of it and is therefore a most important measure in focal centers of anthrax. Anthrax infection of the intestines, according to our data, is encountered much more often than is usually believed at present; its ration to other clinical forms of anthrax is about 1:6.

Levkovich, E. N. and Sarmanova, E. S.
NEW DEVELOPMENTS IN THE EPIDEMIOLOGY, PROPHYLAXIS AND DIAGNOSIS OF RUSSIAN-FOREST-SPRING TICK ENCHEPHALITIS. [1961] 13p.
Order from OTS or SLA $1.60 62-15307

Trans. of Sovetskaya Meditsina (USSR) 1956 [v. 20] no. 11, p. 23-[29].

DESCRIPTORS: *Encephalitis, *Ticks, Epidemiology, Diagnosis, Preventive medicine.

Maksimov, S. V. and Simon, I. B.
SOME DRUGS CHARACTERIZED BY A HYPOCHOLESTEREMIC ACTION (O Nekotorykh Sredtstvakh o Gipokholesterinemicheskim Deystveim). 12 Oct 61, 7p. NIH no. 10-8-61.
Order from OTS or SLA $1.10 62-13296

Trans. of Vrachebnoe Delo (USSR) 1959, no. 2, p. 119-124.

DESCRIPTORS: *Drugs, Diseases, *Arteriosclerosis *Cholesterol, Lipoproteins, Metabolism, *Blood, Nicotinic acid, Phenyl radicals, Ethyl radicals, *Acetic acids.

Mittelshtedt, A. A. and Makarova, K. M.
CHANGES IN THE PHOSPHORUS COMPOUND LEVELS OF DIFFERENT AREAS OF THE CENTRAL NERVOUS SYSTEM IN AMYOTROPHIC LATERAL SCLEROSIS (Izmenenie Soderzhaniya Fosfornykh Soedinenii v Razlichnykh Otdelakh Tsentral'noi Sistemy pri Bokovom Amiotroficheskom Skleroze). [1961] [4]p. 3 refs.
Order from OTS or SLA $1.10 62-15346

Trans. of Zhurnal Nevropatologii i Psikhiatrii (USSR) 1959, v. 59 [no. 12] p. 1444-1446.
Another trans. is available from OTS or SLA $1.10 as 61-19834, NIH-4-47-61, [1961] [4]p.

DESCRIPTORS: *Amyotrophic lateral sclerosis, *Phosphorus compounds, Determination, *Brain, *Nervous system

The phosphorus compound titers of affected tissues as determined in five persons who had died of ALS prove that the most significant changes occurring in the white substance of the cerebral hemispheres and in the spinal cord are mainly the result of a decrease in the lipid phosphorus content. The lipid phosphorus content of these structures undergoes a reduction which occasionally reaches considerable proportions. The a. s. p. content is only slightly reduced; evidently, cellular destruction is not significant in these cases.

Mosolygo, Denes.
FURTHER DEVELOPMENT OF THE CAMPAIGN AGAINST TUBERCULOSIS. 28 Apr 61 [5]p. JPRS: 4574
Order from OTS or SLA $1.10 62-19339

Trans. of Nepszabadsag (Hungary) 1961, v. 19, no. 21, p. 2.

DESCRIPTORS: *Tuberculosis, Inhibition, Countermeasures, Diagnosis, Therapy.

Ôlsuf'ev, N. G. and others.
COMBINATION OF TULAREMIA CONTROL MEASURES IN ZONE OF CONSTRUCTION OF STALINGRAD HYDROELECTRIC STATION AND DISTRICTS (RAYONS) ADJACENT TO IT (Prilozhenie: Kompleks Protivotulyaremiinykh Meropriyatii v Zone Stroitel'stva Stalingradskogo Hidrouzla i Prilegaiushchikh k Nemu Raionov). 1960 [5]p. RSTP T-23-60.
Order from OTS or SLA $1.10 62-15389

Trans. of mono. Voprosy Epidemiologii i Profilatiki Tulyaremii (Problems of Epidemiology and Prophylaxis o Tularemia) Moscow, 1958, suppl., p. 184-185.

DESCRIPTORS: *Tularemia, Epidemiology, Therapy,

Olsuf'ev, N. G., Pastukhov, B. N., and Kucheruk, V. V., eds.
PROBLEMS OF EPIDEMIOLOGY AND PROPHYLAXIS OF TULAREMIA: COLLECTION OF CONCLUSIONS AND BIBLIOGRAPHIES. [1961] [31]p. 84 refs.
Order from OTS or SLA $3.60 62-15327

Trans. from mono. [Voprosy Epidemiologii i Profilaktiki Tulyaremii] Moscow, 1958.

DESCRIPTORS: *Epidemiology, Preventive medicine, *Tularemia, Bibliography.

Ôlsuf'ev, N. G., ed.
PROBLEMS OF EPIDEMIOLOGY AND PROPHYLAXIS OF TULAREMIA: A LIST OF RUSSIAN PAPERS. 1960 [5]p. 23 refs.
Order from OTS or SLA $1.10 62-15099

Trans. of mono. Voprosy Epidemiologii i Profilaktiki Tulyaremii, Moscow, 1958 [table of contents].

DESCRIPTORS: *Epidemiology, Preventive medicine, *Tularemia

Translations of any of the 23 papers listed herein will be furnished by the National Institute of Health upon request from any American scientific journal that wishes to consider publishing it.

Olsuf'ev, N. G., Pavlovskii, E. N. and Muromtsev, S. N.
TULAREMIA: WORLD DISTRIBUTION OF TULAREMIA, ITS EPIDEMIOLOGY AND PROPHYLAXIS (Tulyaremiya: Mirovoe Rasprostranenie Tulyaremii, Ee Epidemiologiya i Profilaktika). 1961, 34p. 1 ref.
Order from OTS or SLA $3.60 62-15098

Trans. of 1960 reprint of mono. Prirodnaya Ochagovost' i Epidemiologiya Osobo Opasnykh Infektsionnykh Zabolevanii (Natural Foci and Epidemiology of Highly Dangerous Infectious Diseases) Saratov, 1959, p. 422-436.

DESCRIPTORS: *Tularemia, Distribution, *Epidemiology, Infections, Diseases, Tularemia vaccine.

Pavlenko, S. M.
RUSSIA'S PATHOPHYSIOLOGY ON THE 40TH. ANNIVERSARY OF OCTOBER (Otechestvennaya Patologicheskaya Fiziologiya k 40-Letiyu Oktyabr'sloi). 1960, 25p. 3 refs. RSTP S-33-60.
Order from OTS or SLA $2.60 62-15069

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1957 [v. 1] no. 5, p. 3-12.

DESCRIPTORS: *Pathology, Physiology, Therapy, Medical research

Pihl, H.
CONFERENCE ON INFECTIOUS DISEASES IN LENINGRAD. 11 Oct 61 [5]p. JPRS: 10460.
Order from OTS or SLA $1.10 62-13079

Trans. of Zdravookhranenie Sovetskoi Estonii (USSR) 1960, no. 5, p. 71-72.

DESCRIPTORS: *Conferences, *Infections, Diseases, Scientific reports.

Rowinski, Ksawery.
SCIENTISTS AND RESEARCH WORK IN THE MEDICAL ACADEMIES OF POLAND, PTS. I-II. 28 Feb 61 [25]p. JPRS: 6842
Order from OTS or SLA $2.60 62-19312

Trans. of Polski Tygodnik Lekarski, 1960, v. 15, no. 34, p. 1321-1327 and no. 35, p. 1366-1369.

DESCRIPTORS: *Medical research, Scientific research, *Poland.

Rudoi, N. M.
PRESENT STATUS OF THE PROBLEM OF BLOOD SERUM PROTEINS IN THE CLINIC OF TUBERCULOSIS (ELECTROPHORETIC RESEARCH) (Sovremennoe Sostoyanie Voprosa o Belkakh Syvorotki Krovi v Klinike Tuberkuleza (Issledovanie Elektroforezom)). [1961] [15]p. 40 refs. [NIH] no. 57.
Order from OTS or SLA $1.60 62-15730

Trans. of Sovremennye Problemy Tuberkuleza (USSR) 1955, v. 6 [no. 5] p. 3-8.

DESCRIPTORS: *Tuberculosis, Blood, Serum, Proteins.

Shanin, A. P.
PRIMARY RETROPERITONEAL TUMOURS (O Pervichnykh Zabryushinnykh Opukholyakh). [1961] 26p. [NIH]-129.
Order from OTS or SLA $2.60 62-15111

Trans. of Sovremennye Problemy Onkologii (USSR) 1956, v. 8, no. 1, p. 3-14.
DESCRIPTORS: *Tumors, Peritoneum, Abdomen, Tissues (Biology).

Shabad, L. M.
SOME QUESTIONS OF THE ETIOLOGY AND PATHOGENESIS OF CANCER. [1961] 28p. 59 refs. [NIH] no. 128.
Order from OTS or SLA $2.60 62-15112

Trans. of Voprosy Onkologii (USSR) 1956, v. 2, no. 1, p. 10-18.

DESCRIPTORS: *Cancer, Diseases, Etiology.

Shmuter, M. F. and Abramova, S. G.
A CASE OF THE ISOLATION OF A CULTURE OF B. TULARENSE FROM AN AMERICAN MINK (Sluchai Vydeleniya Kul'tury B. Tularense ot Amerikanskoi Norki). [1961] 2p.
Order from OTS or SLA $1.10 62-15004

Trans. of Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956, v. 10, p. 229-230.

DESCRIPTORS: *Tularemia, *Culture media, Separation, Tissue culture, Mammals.

Shnitser, I. S.
CHANGES IN SOME INTERNAL ORGANS DURING BURN TRAUMA. 29 Jan 62 [12]p. JPRS: 12290.
Order from OTS or SLA $1.60 62-15768

Trans. of Sovetskaya Meditsina (USSR) 1960, v. 24, no. 4, p. 54-61.

DESCRIPTORS: *Burns, Pathology, Blood circulation

Sirotkina, M.
THE SECOND MOSCOW MEDICAL INSTITUTE. 20 Dec 61 [7]p. JPRS: 11747.
Order from OTS or SLA $1.10 62-15214

Trans. of Bol'shaya Meditsinskaya Entsiklopediya (USSR) 1961, 2d ed, v. 19, p. 94-99.

DESCRIPTORS: *Universities, Public health, Medical personnel, Education, *Medical research, Training, Hospitals.

This institute began its existence as a medical faculty of the Moscow Higher Courses for Women in 1906.

Skatkov, M. E.
PROPHYLACTIC USE OF IODINE IN ENDEMIC GOITRE (Iodnaya Profilaktika Endemicheskogo Zoba) tr. by J. J. Oliver. [1961] 13p. 44 refs. [NIH]-97.
Order from OTS or SLA $1.60 62-15123

Trans. of Problemy Endokrinologii [i Gormonoterapii] (USSR) 1956, v. 2, no. 1, p. 111-117.

DESCRIPTORS: Iodine, *Potassium compounds, Iodides, Preventive medicine, *Thyroid gland, Diseases, *Iodates, Diet, Physiology.

In order to provide the body with its physiological iodine demands (200-250 μg per day) it is essential to raise the level of potassium iodide in iodised salt to 40-50 gms per ton. The method of group goitre prophylaxis, has insufficient logical basis, and should be discontinued. Consideration should be given to a gradual changeover from potassium iodide to potassium iodate, with appropriate checks both on the effectiveness of the iodine prophylaxis and on the absence of toxicity of the preparation.

Smirnov, A. A.
THE INFLUENCE OF HIGH TEMPERATURES AND THE HUMIDITY OF THE AIR ON THE RATE OF OVERHEATING THE HUMAN ORGANISM. 17 Jan 62 [7]p. 4 refs. JPRS: 12009.
Order from OTS or SLA $1.10 62-15487

Trans. of Gigiena i Sanitariya (USSR) 1961, v. 26, no. 10, p. 16-19.

DESCRIPTORS: *Air, *Humidity, Body temperature, *Heat production (Biology), Physiology.

Under the various effects of high temperatures of the surrounding environment and relative humidity of 15 to 20% the harmless exposure periods, when slight changes in the physiological indices at temperatures of 40^{o}, 50^{o}, 60^{o}, and 70^{o} were noted, were 240, 30, 20, and 10 minutes. The permissible exposure periods, when significant changes in the physiological indices at temperatures of 50^{o}, 60^{o}, and 70^{o} were noted, were 60, 40, and 20 minutes, respectively. The maximum possible exposure periods, when serious changes in the physiological indices at temperatures of 50^{o}, 60^{o}, and 70^{o}, took place, were 90, 60, and 35 minutes. Possible exposure periods of a human at air temperatures of 40^{o}, 50^{o}, 60^{o}, and 70^{o} and relative humidity of 70 to 75% were as follows: harmless exposure period corresponded to 120, 15, 10, and 5 minutes, permissible -- 180, 30, 15 and 10 minutes, and maximum possible exposure period -- 240, 60, 30, and 20 minutes.

Sokolov, U. N. and Petrov, V. I.
THE PROBLEM OF THE DIAGNOSIS OF CARCINOMA OF THE STOMACH, tr. by L. Summerfield. [1961] [22]p. (3 figs. omitted) 17 refs.
Order from OTS or SLA $2.60 62-13961

Trans. of #V[oprosy] O[nkologii] (USSR) 1960, v. 6, no. 11, p. 3-11.

DESCRIPTORS: *Stomach, *Cancer, Diagnosis, *Tumors.

Štritesky, J., Vacek, M., and Dolejsi, V.
THE GENERAL MORBIDITY OF THE POPULATION OF THE CSSR. 6 Nov 61 [14]p. JPRS: 10947.
Order from OTS or SLA $1.60 62-19713

Trans. of Deutsche Gesundheitswesen (East Germany) 1961 [v. 16] no. 15, p. 690-694.

DESCRIPTORS: *Vital statistics, Czechoslovakia, *Diseases, Medical research, Public health

Stupnitskaya, V. M. and Gorfinkel', G. A.
GRAM-NEGATIVE MICROFLORA ISOLATED FROM GRAY RATS IN THE CITY OF KIEV. [1961] [3]p.
Order from OTS or SLA $1.10 62-15008

Trans. of Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956, v. 10, p. 475-477.

DESCRIPTORS: *Rats, Intestine, Microorganisms, Sterility, Epidemiology, *Diseases.

Paratyphoid and dysenteric microbes were discovered in the intestines of gray rats of the city of Kiev. The parenchymatous organs of the live and healthy rats were sterile. The microbic dissemination of the parenchymatous organs of the dead rats takes place posthumously from the contents of their intestines. (Author)

Timofeevskii, A. D.
THE USE OF TISSUE CULTURES FOR THE STUDY OF ONCOGENOUS VIRUSES (Primenie Kul'tury Tkanei Dlya Izucheniya Onkogennykh Virusov). 19 Jan 62 [15]p. 49 refs. NIH no. 1-29-62.
Order from OTS or SLA $1.60 62-15798

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1960 [v. 15] no. 12, p. 3-14.
Another trans. is available from OTS $2.75 in 61-21573, JPRS-9232, 5 May 61, 145p.

DESCRIPTORS: *Cancer, Cells (Biology), Etiology, *Tissue culture, *Viruses, Growth.

Toporkova, I. B.
THE STATUS OF VITAMIN C METABOLISM IN CONNECTION WITH THE CHRONIC EXPOSURE OF WORKERS IN THE TOBACCO INDUSTRY TO TOBACCO DUST. [1961] 19p. 26 refs.
Order from OTS or SLA $1.60 62-15334

Trans. of Sanitarno-Gigienicheskii Meditsinskii Institut. Trudy (USSR) 1959, v. 47, p. 243-253.

DESCRIPTORS: *Ascorbic acid, Metabolism *Personnel, Exposure, *Tobacco, Industry, Vitamins.

Tobacco dust influences the vitamin C balance of workers handling tobacco. The urine of a majority of tobacco workers in a tobacco factory showed, even in the month of October (the period of optimal organism vitamin C content in the Leningrad area), a low content of ascorbic acid, with a further decrease of this toward spring, in which the greatest downward shift in vitamin balance is found in the October-November values. To liquidate the vitamin C deficit in tobacco factory workers engaged in processing of tobacco, and also to improve organism resistance to the toxic effect of nicotine, it is necessary to institute prophylactic 'vitaminization.' (Author)

Tsagareli, Z. G.
STRUCTURAL CHANGES IN HIGHER AND LOWER BRANCHES OF THE NERVOUS SYSTEM DURING EXPERIMENTAL COMPLETE STARVATION.
30 Oct 61 [10]p. 10 refs. JPRS: 10852.
Order from OTS or SLA $1.10 62-13348

Trans. of Akademiya Nauk Gruzinskoi SSR, Tiflis. Soobshcheniya, 1961, v. 26, no. 1, p. 87-94.

DESCRIPTORS: *Starvation, Pathology, Nuclei (Biology), *Nervous system, *Autonomic nervous system, *Vagus nerve, Ganglia, Cells (Biology), Glycogen, Nucleoproteins, Hydrogen ion concentration.

Research showed that during an experimental alimentary dystrophy, the weight of the structural changes and the degree of diffusion of the said changes are much more revealed in the vagus nerve, its nodular ganglia and in the posterior nuclei of vagus in the medulla oblongata then in the other parts of the nervous system. The second place in the degree of diffusion process and weight of the structural changes is taken by the sympathetic nuclei of the lateral horns of the spinal cord. The third place by intervertebral nodes and posterior horns of the spinal cord, and the fourth place by cerebral cortex. In the study of the histochemical changes of the higher and lower branches of the nervous system during experimental alimentary dystrophy, it was revealed that from the second day of starvation in all branches of the nervous system, namely: in the nerve cells of the intervertebral and sympathetic nodes, as well as in the nerve cells of blood vessels and in the intercellular substance, quantity of glycogen (second day of starvation) decreases, and totally disappears on the fourth day. On the fourth day of starvation, nucleoproteids begin to be revealed at somewhat lower pH levels (compared to normal. Further, on the sixth day of starvation and later, they are revealed at still lower pH levels. The quantity of desoxyribonucleoproteids in the course of the experimental starvation remains without variation in all branches of the nervous system.

Tsvetkova, L. S.
RESTORATION OF SPEECH IN BRAIN LESIONS. Rept. no. 1 of Gradual Restoration of Reading Ability with Impaired Capacity for Sound-Letter Analysis. 16 Oct 61 [8]p. JPRS: 10609.
Order from OTS or SLA $1.10 62-13039

Trans. of Akademiya Pedagogicheskikh Nauk RSFSR. Doklady, 1960, no. 4, p. 109-112.

DESCRIPTORS: *Speech, *Reading, *Brain, *Injuries, Reading machines, Therapy.

The restorative reading process is illustrated by a case history. The restoration of sound-letter analysis was the chief task in the restorative training; and the use of the "frame" was an effective external resource in reading restoration, which was previously limited to direct word cognition and "guesswork" reading. The gradual restoration of reading first relied on the system of external resources, which served as obstacles to guesswork reading and permitted the achievement of sound-letter analysis. Only gradually were these external resources replaced by other methods, and the method of

restoring impaired function produced the required effect when the extended material organization of the activity was replaced by an inner and restrictive activity. The process of restorative training structured in this way taught the patient to analyze and read the word. The eventual automatization of reading and its development from reading aloud to an automatized process are problems for the future training of the patient.

Uzunov, G., Bozhinov, S., and Georgiev, Iv.
CONTEMPORARY ENCEPHALITIS IN BULGARIA. 25 Jan 62 [13]p. JPRS: 12164.
Order from OTS or SLA $1.60 62-19554

Trans. of Suvremenna Meditsina (Bulgaria) 1961, v. 12, no. 1, p. 3-11.

DESCRIPTORS: *Encephalitis, Brain, Virus diseases, *Bulgaria.

Vilmon, Gyulah.
ORGANIZATIONAL DEVELOPMENT OF HEALTH AFFAIRS. 5 Dec 60 [10]p. JPRS: 4244.
Order from OTS or SLA $1.10 62-19332

Trans. of Nepegeszsegugy (Hungary) 1960, v. 41, no. 4, p. 87-90.

DESCRIPTORS: *Public health, Industrial medicine, Preventive medicine, Health insurance.

Vilyanskii, M. P.
ARTERIOGRAPHY DURING ENDARTERITIS OBLITERAMS: CONCLUSION. 29 Jan 62 [5]p. JPRS: 12292.
Order from OTS or SLA $1.10 62-15657

Trans. of mono. Arteriografiya pri Obliteriruyushchem Endarteriite, Moscow, 1959, p. 92-95.

DESCRIPTORS: *Arteriolonecrosis, Blood circulation arteries, *Diagnosis, Photography, Therapy, Surgery, Autonomic nervous system, Ganglia, Drugs,

Volkova, L. T.
REACTIONS OF THE CENTRAL NERVOUS SYSTEM TO LOSS OF BLOOD IN THE THIRD STAGE OF LABOR (Reaktsiya Tsentral'noi Nervovoi Sistemi na Krovovtratu v Tret'omu Periodi Rodiv). 1960, 12p. RSTP Ab-1476-60.
Order from OTS or SLA $1.60 62-15075

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1956, no. 5, p. 49-53.

DESCRIPTORS: *Childbirth, *Blood, *Body weight, Cerebral cortex, Nervous system, Motor reactions, Reactions (Psychology)

Of 130 patients under our observation, in 38 (29.2 percent) the third period of labor was accompanied by loss of blood exceeding 0.5 percent of the body weight. Such blood loss is connected with the presence of certain signs of delayed development (late onset of menstruation, uterine dystocia during labor) in 25 of the 38 patients. Shortening of the latent period of responsive motor reactions to a light stimulus in the second stage of labor is regarded as the consequence of a certain activation of the higher divisions of the central nervous system, especially activation of the kinesthetic zone of the cerebral cortex in this stage of labor. Blood loss exceeding 0.5 percent of the body weight of the patient is accompanied by a transient slowing down of responsive motor reactions to the light stimulus (for eight to ten minutes), whereas blood loss equal to one percent or more of the body weight of the patient evokes a greater duration of these changes (12 to 15 minutes) in the latent period in the direction of prolongation. Slowing of responsive reactions to the light stimulus, which occurs under the influence of acute blood loss, is regarded as a result of changes in the functional stage of the central nervous system in the direction of a predominance of the inhibitory process. (Author)

Zaets, T. L. and Zav'yalov, S. K.
THE EFFECT OF LYSING SUBSTANCES ON THE SLOUGHING OFF OF NECROTIC SECTIONS OF TISSUES IN DEEP BURNS. 1 Dec 61 [9]p. JPRS: 11348.
Order from OTS or SLA $1.10 62-13614

Trans. of Akademiya Meditsinskikh Nauk SSSR. Vestnik, 1961 [v. 16] no. 8, p. 12-16.

DESCRIPTORS: *Lysozymes, Therapy, *Burns, Tissues (Biology), *Urea, Proteins, Trypsin, Infections.

The action of a 25% solution of urea for 24 hours contributed on the average to the transfer of 22% of scab protein into a soluble state; about 12% of this protein underwent further desaggregation. Trypsin exerted a very mild effect on the scab proteins; during the period of three hours, 0.2% of proteins was transferred into the solution without further desaggregation. The effect of trypsin, following processing of the scab with urea, resulted in about two percent of scab protein being transferred to a soluble state; about one percent of it underwent further desaggregation. A 25% urea solution exerted a bacteriostatic effect on staphylococci and, partially, on B. protei. Results indicate that the use of urea in high concentrations together with trypsin contributes to a more rapid sloughing off of a necrotic scab.

Pharmacology and Toxicology

BULGARIAN RESEARCH ON MEDICINAL PLANTS. 14 Jan 61 [11]p. (1 fig. omitted) 9 refs. JPRS: 6575.
Order from OTS or SLA $1.60 62-19392

Trans. of Farmatsiya (Bulgaria) 1960, v. 10, no. 1, p. 15-17 and 23-27.

DESCRIPTORS: *Pharmacology, *Plants, Alkaloids, Blood pressure, Respiration, Drugs, Bulgaria.

Contents:
The pharmacological study of certain Bulgarian alkaloidal plants, by L. Daleva and Zh. Sheikova
The obtention of extracts from Cheiranthus Cheiri L. and Tropeolum Majus L. and the experimental study of their effects on blood pressure and respiration, by V. Petkov and M. Penova.

PROSPECTS IN THE CHEMOTHERAPY OF VIRUS DISEASES. [1961] 6p.
Order from OTS or SLA $1.10 62-13942

Trans. of #Vopr[osy] Virusol[ogii] (USSR) 1960, v. 5, no. 5, p. 634-635.

DESCRIPTORS: *Virus diseases, *Chemotherapeutic agents, Diseases.

THERAPY OF LEUKOPENIA. 26 Jan 62 [15]p. JPRS: 12175.
Order from OTS or SLA $1.60 62-15651

Trans. of mono. Leukopeniae and Agranulocytoses, Leningrad, 1961, chap. 14, p. 151-161.

DESCRIPTORS: Therapy, *Leukopenia, *Nucleic acids, Leukocytes, *Corticosteroids, ACTH, Hormones, *Bone marrow, Transplantation, Blood transfusions.

Donets, Yu. I.
CASE OF BOTULISM PROVOKED BY THE CAUSAL AGENT OF TYPE E (O Sluchae Botulizma, Vyzvannom Vozbuditelem Tipa E). 27 Nov 61, 10p. 5 refs. Trans. V-1752.
Order from OTS or SLA $1.10 62-13453

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961, v. 32, no. 7, 137-139.

DESCRIPTORS: *Botulism, Fishes, Toxicology.

Laboratory confirmation is reported concerning a fatal case of food poisoning provoked by the causal agent of type E botulism. The illness was caused by the use of a fried sea bass that had been heavily salted as food. The presence of the botulism type E toxin was established by the method of determining the phagocytic indicator in the blood of the victim and in the contents of the small intestine. The toxigenic culture of the causal agent of type E botulism was isolated by means of inoculation of the contents of the small intestine and the remains of the fish. (Author)

Gyarmati, Laszlo and David, Gabor.
INVESTIGATION OF THE DECOMPOSITION OF ALKYLPHOSPHATES IN BLOOD AND SERUM. 14 Mar 61 [12]p. JPRS: 4452.
Order from OTS or SLA $1.60 62-19398

Trans. of Honvedorvos (Hungary) 1960, v. 12, no. 4, p. 335-342.

DESCRIPTORS: *Insecticides, *Fluorides, *Phosphates, Poisons, Toxicity, Diagnosis, Decomposition, *Fluorophosphatase, Alkyl radicals, *Phosphatases, Enzymes.

A method is described for determining the presence of diisopropylfluorophate (DEP) blood and serum. By the use of this method it was found that the decomposition of DEP is very rapid in blood and serum. It is not possible to detect the presence of DFP in the blood or serum of poisoned animals, therefore it is not practicable to attempt diagnosis on this basis. The evidence of rapid decomposition of DFP is taken as proof for the existence of alkylphosphatase in serum.

Harter, P., Litalien, F., and Trinh-Thi-Kim-Mong-Don.
USE OF A DIPHENYL-THIOUREA (4-BUTOXY-4'-DIMETHYL-AMINO-THIOCARBANILIDE, OR SUMMIT-1906) IN CERTAIN VARIETIES OF LEPROSY (Emploi d'une Diphényl-Thiourée (4-Butoxy-4'-Dimethyl-Amino-Thiocarbanilide ou Summit-1906) dans Certaines Variétés de Lepres). [1961] [12]p. 14 refs.
Order from SLA $1.60 62-10015

Trans. of Société de Pathologie Exotique. Bulletin (France) 1960, v. 53, Nov/Dec, p. 950-960.

DESCRIPTORS: *Leprosy, Drugs, Pharmacology, Sulfones, *Toxicity, *Thiourea derivatives, *Diphenyl.

The activity of 4-butoxy-4'-dimethyl-amino-thiocarbanilide was observed in 23 cases. A genuine efficacy was observed in certain circumstances where sulfones no longer appeared to act. The action of this compound is perhaps more rapid than that of sulfones, but it must be handled as carefully as the other anti leprosic remedies. The dose varies from 2 to 4 gm. depending upon body weight, and is increased rapidly. The frequency and the duration of treatment are similar to those employed in sulfonotherapy. (Author)

Issekutz, Bela.
THE HISTORY OF HUNGARIAN PHARMACEUTICAL RESEARCH. 10 Nov 60 [19]p. 54 refs. JPRS: 6213.
Order from OTS or SLA $1.60 62-19198

Trans. of Magyar Tudomanyos Akademia Biologiai es Orvosi Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 11, no. 1, p. 5-17.

DESCRIPTORS: *Pharmacology, Drugs, Medicine, Therapy, History, Hungary.

Lazar, Jeno.
FIFTEEN YEARS OF PHARMACEUTICAL SERVICES IN HUNGARY. 1 Feb 61 [9]p. JPRS: 4370.
Order from OTS or SLA $1.10 62-19321

Trans. of Nepegeszsegugy (Hungary) 1960, v. 41, no. 4, p. 108-111.

DESCRIPTORS: *Pharmacology, *Drugs, Distribution, Production, Urban areas, Rural areas, Medical research, Hungary

Lederer, J.
CLINICAL STUDY OF A NEW PROTEIN ANABOLIZER [Etude Clinique d'un Nouvel Anabolisant des Proteines]. [1961] 15p. 25 refs.
Order from SLA $1.60 61-20911

Trans. of Schweizerische Medizinische Wochenschrift, 1960, v. 90 [no. 48] p. 1379-1383.
Another trans. is available from SLA mi$2.40, ph$3.30 as 61-10901, 27 Feb 61, 15p.

DESCRIPTORS: *Methandrostenolone, Androgens, Drugs, Growth, Dosage, Reproductive system, Age, Proteins, Metabolism.

Dianabol was given orally to 15 children of both sexes with retarded growth but without any other abnormalities. The drug proved to be a strong stimulant of protein anabolism and produced a steady increase in the rate of growth of these children whose weight and height subsequently reached the normal range. In therapeutic doses no androgenic effect was observed. In high doses, on the contrary, sexual effects, erections, public hair and gynecomastia appeared. It is therefore necessary to assess the dose of the drug carefully according to age and to alternate 4-6 week periods with and without treatment. The stage of ossification of the skeleton should be assessed regularly. (Author)

Makarovskaya, L. N.
PROPHYLACTIC AND THERAPEUTIC EFFECT OF STREPTOMYCIN IN EXPERIMENTAL PLAGUE IN GUINEA PIGS (Preduprediteľnoe i Lechnebnoe Deistvie Streptomitsina pri Eksperimental'noe Chume Morskikh Svinok). [1961] [16]p.
Order from OTS or SLA $1.60 62-13995

Trans. of Gosudarstvennyi Nauchno-Issledovatel'skii Protivochumnyi Institut. Trudy (USSR) 1956, v. 10, p. 3-16.

DESCRIPTORS: *Plague, Infections, *Streptomycins, Therapy, Effectiveness.

Nowak, Franciszek.
THE ANNIVERSARY OF SILESIAN PHARMACY. 20 Dec 61 [8]p. JPRS: 11598.
Order from OTS or SLA $1.10 62-19613

Trans. of Farmacja Polska, 1961 [v. 17] no. 12, p. 245-247.

DESCRIPTORS: *Pharmacology, Drugs, Czechoslovakia.

Pyasetskii, N. R.
NEW DEVELOPMENTS IN THE TREATMENT OF DIABETES MELLITUS. [1961] 15p. 20 refs. [NIH] no. 94.
Order from OTS or SLA $1.60 62-15126

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1957, v. 3, no. 2, p. 82-90.

DESCRIPTORS: *Diabetes, Insulin, Sulfonamides, Therapy.

Runova, M. F.
THE EFFECTS OF CERTAIN SOMNIFACIENTS (BARBITURATES) ON THE PERIPHERAL BLOOD PICTURE IN NORMAL AND PATHOLOGICAL ANIMALS. [1961] 2p.
Order from OTS or SLA $1.10 62-15305

Trans. of Farmakologiya i Toksikologiya (USSR) 1954 [v. 17] no. 6, p. 39.

DESCRIPTORS: *Barbituates, Hemopoiesis, Blood, Nervous system, Cerebral cortex.

Tarjan, Pongracz and Barath, Jeno.
EXPERIMENTS WITH VASCULAT AND COMBINED IODINE-VASCULAT TREATMENTS OF ARTERIAL DISEASES AFFECTING THE BLOOD SUPPLY. 3 Jan 62 [4]p. JPRS: 11775.
Order from OTS or SLA $1.10 62-19622

Partial trans. (some parts summarized) of Orvosi Hetilap (Hungary) 1961, v. 102, no. 35, p. 1655-1657.

DESCRIPTORS: *Vasomotor drugs, *Drugs, Blood circulation, Pharmacology, *Vaskulat, Diseases, Circulatory system, Iodides, Sulfates.

In 125 cases (hypertonia, peripheral arteriosclerosis, coronary-and cerebral atherosclerosis) we have examined the effectiveness of treatments with Vasculat and combined iodine-Vasculat treatments. The preparation is causing considerable vasodilation that can be substantiated by oscillometric basic experiments. It has no harmful side-effects; in elderly and sensitive patients sometimes reddening and tachycardia may occur. In peripheral arterial diseases good results may be obtained with Vasculat treatments, chiefly in connection with intravenous iodine treatments. In many cases, after Vasculat has been given, the lessening of eye tension, the dilation of the pupil, and the expansion of the choroid vessels could be observed. (Author)

Turkevich, M. M., Pinyazko, I. R. M., and Gnidets', I. R.
REVIEW OF CERTAIN PHARMACEUTICAL JOURNALS. 17 July 61 [9]p. JPRS: 4783.
Order from OTS or SLA $1.10 61-27243

Trans. of Farmatsevtychnyi Zhurnal (USSR) 1960, v. 15, no. 1, p. 85-87.

DESCRIPTORS: *Pharmacology, Periodicals.

Radiobiology

SOME EFFECTS OF ACUTE RADIATION SICKNESS UPON TISSUE. 4 Jan 62 [31]p. 36 refs. JPRS: 11816.
Order from OTS or SLA $3.60 62-15366

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1961, v. 5, no. 5, p. 59-70.

DESCRIPTORS: *Body fluids, *Radiation sickness, *Tissues (Biology), X-rays, Ionization, Labeled substances, Metabolism, Minerals. *Bone, Antigens

Contents:
The humoral mechanisms of mineral metabolism changes in calcified tissues in acute radiation sickness, by N. A. Zhizhina and A. A. Prokhonchukov
Phenomena of sensitization of loose connective tissue in acute radiation sickness, by V. V. Shikhodyrov and others.

Astaurov, B. L.
DIFFERENTIAL EFFECT OF RADIATION INJURIES TO THE NUCLEUS AND CYTOPLASM AS A RESULT OF THEIR FUNCTIONAL SPECIFICITY (Differentsial'nyi Effekt Radiatsionnykh Povrezhdenii Yadra i Tsitoplasmy kak Sledstvie Ikh Funktsional'noi Spetsifichnosti). 25 Sep 61, 44p. 48 refs. Trans. A-1293.
Order from OTS or SLA $4.60 62-13480

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten'. Otdel Biologicheskii (USSR) 1958 [v. 33](63) no. 1, p. 35-50.

DESCRIPTORS: *Radiation injuries, *Cells (Biology), *Nuclei, Mutations, Biosynthesis, Histology *Chromosomes

A monistic outlook is developed on the causes of diverse manifestations of the biological effect of radiation, at times so dissimilar as the radiation disease and the mutation effect, and which are usually considered isolatedly. The general biologically important primary cause of any radiobiological effects is believed to be the destruction of vitally important nuclear elements and disruption of the subsequent work of nuclei in processes of constructive biosynthesis. This point of view can explain a series of special radiobiological effects, which seem to be very mysterious.

Dzhafarov, G. A. K.
THE TOXICITY FOR PARAMECIA OF THE PLASMA OF HEALTHY AND IRRADIATED RATS AFTER BEING BURNED, INJURED AND STARVED (Toksichnost' dlya Paramətsii Plazmy Zdorovykh i Obluchennykh Krys pri Ozhoge, Travme i Golodanii). 3 Nov 61 [6]p. 2 refs. JPRS: 10843.
Order from OTS or SLA $1.10 62-13416

Trans. of Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya (USSR) 1961, v. 5, no. 4, p. 70-71.

DESCRIPTORS: *Toxicity, *Paramecium, *Blood plasma, Rats, *Radiation effects, Burns, Injuries, Starvation.

Rats were totally irradiated and then subjected to burns, bone fractures and starvation. The toxicity to paramecia of the blood plasma (TPP) of these animals was compared with the TPP of unirradiated animals traumized in the same manner, and animals subjected to irradiation without trauma. The TPP in the irradiated and traumized animals was unchanged from that of the animals irridated but not subjected to trauma. Substances that are toxic for paramecia are not protein breakdown products from burns, injury or starvation, and are different from the toxins of radiation sickness.

Efroimson, V. P.
DETERMINATION OF THE EFFECT OF RADIATION UPON HUMAN HEREDITY BY STUDYING CHROMOSOME DISEASE. 12 Jan 62 [9]p. 7 refs. JPRS: 11901.
Order from OTS or SLA $1.10 62-15376

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten' Otdel Biologicheskii (USSR) 1960, [v. 35(65)] no. 3, p. 150ff.

DESCRIPTORS: *Radiation effects, *Genetics, Mitosis, *Chromosomes, Age, Childbirth, *Congenital anomalies, Mental deficiency.

The study of the frequency of Down's syndrome (cm. 1/700) and groups of the Klinefelter, Shereshevskiy-Turner, and XXX (cm. 1/500) syndromes will make it possible to measure the effect of small doses of radiation.

Letavet, A. A. and Gordon, Z. V., eds.
THE BIOLOGICAL ACTION OF ULTRAHIGH FREQUENCIES. 15 Feb 62 [149]p. 105 refs. JPRS: 12471.
Order from OTS or SLA $11.00 62-19175

Trans. of mono. O Biologicheskom Vozdeistvii Sverkhvysokikh Chastot, Moscow, 1960, 134p.

DESCRIPTORS: *Biology, *Ultrahigh frequency, Electromagnetic fields, Generators, Industrial medicine, Nervous system, Eye, Blood, Proteins, Histamines, High frequency, Thyroid gland, Olfactory thresholds, Body temperature, Reactions (Psychology), Animals, Survival, Blood pressure, Cerebral cortex, Neurology, Cholinesterase, Pressure gages, Morphology, Pathology, Radiation effects, Countermeasures, Medical examination, Labor, Fluxmeters.

Contents:
The problem of the biological action of UHF, by Z. V. Gordon
Parameters of UHF fields determining the hygienic evaluation of working conditions and the problem of their measurement, by K. G. Khoppe
Hygienic evaluation of the working conditions of workers with UHF generators, by Z. V. Gordon
The clinic of chronic UHF influence on the human organism, by E. A. Drogichina
State of the nervous system under the influence of UHF by M. N. Sadchikova
The clinic of changes of the internal organs under the influence of UHF, by A. A. Orlova
Influence of UHF on the organ of sight, by S. F. Belova
Changes in the blood under the influence of UHF on the organism, by V. V. Sokolev
Protein fractions and histamine of the blood under the influence of UHF and HF, by I. A. Gel'fon and Sadchikova
Determination of the functional activity of the thyroid gland by means of radioactive iodine in workers with UHF generators, by M. I. Smirnova and M. N. Sadchikova
Investigation of the olfactory sensitivity in persons subjected to the influence of UHF, by E. A. Lobanova and Z. V. Gordon
Temperature reaction of animals under the influence of UHF, by Z. V. Gordon and E. A. Lobanova
Survival and development of animals with various intensities and durations of the influence of UHF, by E. A. Lobanova

Investigation of the blood pressure in rats (bloodless method) under the influence of UHF, by Z. V. Gordon

Charge in the higher nervous activity and interneuron connections in the cerebral cortex of animals under the influence of UHF, by E. A. Lobanova and M. S. Tolgskaya

Investigation of the interrelationships between the basic neural processes in rats under the influence of UHF of various intensities, by I. A. Kitsovskaya

Influence of UHF on the cholinesterase activity in the blood serum and organs in animals, by S. V. Mikogosyan

Variation of the elastotonometric curve in rabbits under the influence of UHF, by S. F. Belova

Morphological changes in experimental animals under the influence of pulse and continuous UHF, by M. S. Tolgskaya and others

Changes in the receptor and interoreceptor apparatuses under the influence of UHF, by M. S. Tolgskaya and Z. V. Gordon

Protection from radiation in work with UHF generators, by S. M. Belitskii and K. G. Knorre

Recommendations for conducting preliminary and periodic medical examinations of workers with UHF sources

Temporary sanitary regulations in work with generators of centimeter waves

Temporary instructions on the method of measuring the power flux density of the UHF energy at the working positions.

Letavet, A. A. and Kurlyandskaya, E. B.
TOXICOLOGY OF RADIOACTIVE SUBSTANCES, VOL. 1: STRONTIUM, RUTHENIUM, CAESIUM AND RADON, tr. ed. by Elizabeth Lloyd. June 62, 286p.
Order from PP $12.50

Trans. of unidentified Russian mono., n. p., n. d.

DESCRIPTORS: Labeled substances, *Radioactive isotopes, *Strontium, *Ruthenium, *Cesuim, *Radon, Toxicity.

Pochapinskii, V. I., Ermol'eva, Z. V., and Breger, A. Kh.
RADIATION STERILIZATION OF ANTIBIOTIC PREPARATIONS. 26 Jan 62 [20]p. 14 refs. JPRS: 12194
Order from OTS or SLA $1.60 62-15649

Trans. of Meditsinskaya Promyshlennost' SSSR, 1961 [v. 15] no. 9, p. 28-33.

Portions of this report will not reproduce well.

DESCRIPTORS: *Antibiotics, *Disinfectants, Streptomycins, *Gamma rays, Radiation effects.

The feasibility of the use of γ-radiation of radioactive cobalt for the sterilization of streptomycin sulfates and dihydrostreptomycin, streptomycin calcium chloride complex, pasomycin, and streptopenicillin was shown experimentally. The 2.5 million rad dose of energy absorbed secures the sterility of irradiated preparations of antibiotics of the streptomycin group in their commercial package upon their maximally possible seeding with bacteria. After radiation sterilization all preparations of the streptomycin group, except the lyophilically dried sulfates of streptomycin and dihydrostreptomycin, satisfy the basic requirements of the respective technical standards in respect to their therapeutic effectiveness, antibiotical activity, and pharmacological and other qualitative properties. (Author)

Stankevich, N. V.
CLOSING OF A PENETRATING DEFECT OF THE GASTRIC WALL BY MEANS OF A HOMOTRANSPLANT IN A COMBINED EXPERIMENTAL RADIATION INJURY (Zakrytie Pronikayushchego Defekta Stenki Zheludka Gomotransplantom pri Kombinirovannom Luchevom Porazhenii v Eksperimente). 3 Nov 61 [9]p. JPRS: 10882.
Order from OTS or SLA $1.10 62-13372

Trans. of Zdravookhranenie Belorussi (USSR) 1961 [v. 7] no. 8, p. 30-35.

DESCRIPTORS: *Surgery, *Transplantation, *Stomach, Omentum, *Radiation injuries, X-rays, Tissues (Biology), Regeneration.

A preserved muscular aponeurotic homotransplant, wrapped in an omental pedicle, used for the closure of a penetrating large gastric defect during the latent period as well as at the height of radiation sickness in cats, retains its viability. During the latter stages, following its substitution of a large defect of the gastric wall, the homotransplant assumes the structure of the gastric wall, even to the regeneration of the mucous membrane with the usual contour of its folds. A homotransplant, replacing the defect of the gastric wall, represents the fulcrum for the regeneration of gastric mucous glands on it. It undergoes certain transformations and enters the composition of the subepithelial part of the gastric wall at the site of former defect. An X-ray injury to the tissues of the organism does not interfere with the accretion of the homotransplant and does not impair the regenerative property of the gastric mucosa. (Author)

Surgery

Bogush, L. K.
REPORT ON THE PRESENT STATUS OF SURGERY IN TUBERCULOSIS OF THE LUNG, tr. by Mrs. E. F. Tourkoff. [1961] 2p.
Order from OTS or SLA $1.10 62-15301

Partial trans. of Khirurgiya (USSR) 1950, no. 2, p. 80ff.

DESCRIPTORS: *Surgery, *Tuberculosis, *Lungs,

Bryakin, M. I.
THE PROGRESS OF SURGERY IN KAZAKHSTAN DURING 40 YEARS OF SOVIET RULE. 30 Jan 62 [11]p. JPRS: 12221.
Order from OTS or SLA $1.60 62-15659

Trans. of Zdravookhranenie Kazakhstana (USSR) 1961 [v. 21] no. 6, p. 3-8.

DESCRIPTORS: *Surgery, *Public health, Medical research, Medical personnel, *Hospitals.

Pavsha, G. I.
SIMPLIFIED TECHNIQUE OF REMOVAL OF PARAMETRIAL TISSUE IN THE WERTHEIM-GUBAREV OPERATION (Do Pitannya pro Sproshchenu Tekhniku Vidalennya Navkolomatkovi Klitkovini pri Operatsiyakh Vertgeima-Gubareva) 1960, 9p. RSTP Ab-1516-60.
Order from OTS or SLA $1.10 62-15074

Trans. of Pediatriya, Akusherstvo i Ginekologiya (USSR) 1955, no. 6, p. 54-57.

DESCRIPTORS: *Uterus, *Cancer, *Surgery, Tissues (Biology), Surgical trauma, X-rays, Therapy, Radium, Lymph.

The bloodless removal of tissues and the minimal trauma permit the use of our method both in the most advanced cases and especially in the removal of lymph nodes (the Taussig procedure), in cases in which the lymph nodes must be removed following combined radiation therapy. (Author)

Petrovskii, B. V. and Solov'ev, G. M.
ARTIFICIAL HEART-SHUNT SURGERY (Operatsii na Vyklyuchennom Serdtse pri Perekrestnom Krovoobrashchenii v Eksperimente) tr. by B. Haigh. [1961] 15p. (4 figs. omitted) 15 refs. [NIH]-39.
Order from OTS or SLA $1.60 62-15142

Trans. of Khirurgiya (USSR) 1956, v. 32, no. 4, p. 17-24.

DESCRIPTORS: *Heart, *Surgery, Medical research, *Artificial heart.

Preliminary findings show that the method of exchange transfusion makes it possible to isolate the heart from the circulation at normal body temperature for about 30 minutes and to open the right ventricle for performing an intracardiac operation.

Soskin, L. S.
THE PRESENT POSITION IN THE TREATMENT OF BRAIN INSULTS (Sovremennoe Sostoyanie Voprosa o Lechenii Mozgovykh Insul'tov) tr. by R. Crawford. [1961] [30]p. (2 figs. omitted). [NIH]-22.
Order from OTS or SLA $2.60 62-15148

Trans. of Sovetskaya Meditsina (USSR) 1956, v. 20, no. 11, p. 8-18.

DESCRIPTORS: *Brain, Injuries, Wounds, Surgery.

The question of the surgical treatment of brain insults is still far from being finally settled. Some foreign writers suggest operation on patients in the relatively quiescent state 1-4 weeks after the insult. Others reduce this period to 1-2 days. During the first 24-48 hours, if the general condition of the patient deteriorates or if the intracranial pressure is increasing, the question of urgent surgical intervention may advantageously be considered. The operation consists essentially of the creation of an opening in the skull with a drill or trephine and subsequent evacuation of the blood from the haematoma by suction. Whereas attempts at conservative treatment of thrombotic insults have opened up definite possibilities, the conservative treatment of insults due to haemorrhage has virtually failed completely. (Author)

Zoology

Abakumov, V. A.
SEASONAL RACES AMONG ANADROMOUS FISHES (Sezonnye Rasy Prokhodnykh Ryb) tr. by W. E. Ricker. 1961, 18p. 39 refs. FRBC Trans. series no. 353.
Order from NRCC NRCC C-3901

Preliminary trans. of Voprosy Ikhtiologii (USSR) 1961 no. 17, p. 179-190.

DESCRIPTORS: *Fishes, Reproduction.

Birman, I. B.
LOCAL STOCKS OF AUTUMN CHUM SALMON IN THE AMUR BASIN (Lokalnye Stada Osennei Kety v Basseine Amura) tr. by W. E. Ricker. 1961, 22p. 19 refs. FRBC Trans. series no. 349.
Order from NRCC NRCC C-3879

Trans. of Voprosy Ikhtiologii (USSR) 1956, no. 7, p. 158-173.

DESCRIPTORS: *Salmon, Abundance, Fishes.

Dyuzhikov, A. T.
RESULTS OF THREE YEARS OF OBSERVATIONS ON FISH BELOW THE LENIN HYDROELECTRIC STATION ON THE VOLGA (Rezultaty Trekhletnikh Nablyudenii za Rybami v Nizhnem Befe Volzhskoi Ges. im. V. I. Lenina) tr. by W. E. Ricker. 1961, 16p. 14 refs. FRBC Trans. series no. 363.
Order from NRCC NRCC C-3904

Preliminary trans. of Voprosy Ikhtiologii (USSR) 1961, v. 1, no. 1(18) p. 69-78.

DESCRIPTORS: *Fishes, Reproduction, Hydroelectric power systems.

Isaev, A. I.
ACCLIMATIZATION OF PACIFIC SALMON IN THE BARENTS AND WHITE SEAS (Akklimatizatsiya Tikhookeanskikh Lososei v Barentsevom i Belom Moryakh) tr. by W. E. Ricker. 1961, 7p. 8 refs. FRBC Trans. series no. 361.
Order from NRCC NRCC C-3908

Preliminary trans. of Voprosy Ikhtiologii (USSR) 1961, v. 1, no. 1(18) p. 46-51.

DESCRIPTORS: *Salmon, Abundance, Barents Sea, White Sea.

Krokhin, E. M.
SPAWNING GROUNDS OF SOCKEYE SALMON (ONCORHYNCHUS NERKA WALB) A REVIEW OF THEIR GEOMORPHOLOGY, TEMPERATURE CONDITIONS AND HYDROCHEMISTRY (Nerestilishcha Krasnoi (Oncorhynchus Nerka Walb) Ocherk Geomorfologii, Temperaturnovo Rezhima i Gidrokhimii) tr. by R. E. Foerster. 1961 [31]p. 19 refs. FRBC Trans. series no. 344.
Order from NRCC NRCC C-3836

Trans. of Voprosy Ikhtiologii (USSR) 1960, no. 16, p. 89-110.

DESCRIPTORS: *Salmon, Reproduction, Temperature, Physiology.

Moiseev, P. A. and Paraketsov, I. A.
INFORMATION ON THE ECOLOGY OF ROCK-FISHES (FAMILY SCORPAENIDAE) OF THE NORTHERN PART OF THE PACIFIC OCEAN (Nekotorye Dannye ob Ekologii Morskikh Ershei (Sem. Scorpaenidae) Severnoi Chasti Tikhovo Okeana) tr. by W. E. Ricker. 1961, 10p. 9 refs. FRBC Trans. series no. 358.
Order from NRCC NRCC C-3916

Preliminary trans. of Voprosy Ikhtiologii (USSR) 1961, v. 1, no. 1(18) p. 39-45.

DESCRIPTORS: *Fishes, Ecology, Pacific Ocean.

Smirnov, A. I.
THE FUNCTIONAL IMPORTANCE OF THE PRE-SPAWNING CHANGES IN THE SKIN OF SALMON (AS EXEMPLIFIED BY THE GENUS ONCORHYNCHUS) (Funktsionalnoe Znachenie Prednerestovykh Izmenenii Pokrovov Lososei (na Primere Roda Oncorhynchus)) tr. by R. E. Foerster. 1961, 14p. 39 refs. FRBC Trans. series no. 348.
Order from NRCC NRCC C-3895

Trans. of Zoologicheskii Zhurnal (USSR) 1959, v. 38, no. 5, p. 734-744.

DESCRIPTORS: *Salmon, Reproduction, Skin, Physiology, Fishes.

Svetovidova, A. A.
LOCAL STOCKS OF SUMMER KETA, ONCORHYNCHUS KETA (WALBAUM) OF THE AMUR BASIN (Lokalnye Stada Letnei Kety Oncorhynchus Keta (Walbaum) Basseina Amura) tr. by W. E. Ricker. 1961, 16p. 9 refs. FRBC Trans. series no. 347.
Order from NRCC NRCC C-3897

Preliminary trans. of Voprosy Ikhtiologii (USSR) 1961, no. 17, p. 14-23.

DESCRIPTORS: *Salmon, Abundance, Fishes.

Vasilev, I. S.
ON THE ARTIFICIAL RAISING OF THE LEVEL OF WATER ON THE SPAWNING GROUNDS OF FAR-EASTERN SALMON (Ob Iskusstvennom Podnyatii Urovnya Vody na Nerestilishchakh Dalnevostochnykh Lososei) tr. by R. E. Foerster. 1961, 2p. FRBC Trans. series no. 351.
Order from NRCC NRCC C-3900

Trans. of Rybnoe Khozyaistvo (USSR) 1957 [v. 33] no. 7, p. 70-71.
Another trans. is available from OTS $3.00 in 60-51139, PL-480 Int. 1961, 284p.

DESCRIPTORS: *Salmon, Reproduction, Fishes, Water, Dams, Construction.

CHEMISTRY

BIOGRAPHIES OF SOVIET SCIENTISTS. 3 Nov 61 [7]p. JPRS: 10803.
Order from OTS or SLA $1.10 62-13377

Trans. of Akademiya Nauk SSSR. Vestnik, 1961 [v. 31] no. 8.

DESCRIPTORS: *Chemistry, Hydrocarbons, Polymerization, *Philosophy, Scientific personnel

GENERAL MEETING OF THE CHEMICAL SCIENCES SECTION OF THE ACADEMY OF SCIENCES USSR ON 27-28 OCT 60. 1 Nov 61 [5]p. JPRS: 10908.
Order from OTS or SLA $1.10 62-13373

Trans. of #Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1961, no. 2, p. 379-380.

DESCRIPTORS: *Conferences, Scientific reports, *Chemistry.

JOURNAL OF APPLIED CHEMISTRY, 1945, VOL. 18, NO. 3: [TABLE OF CONTENTS AND SELECTED ABSTRACTS. [1961] 3p. 7 refs.
Order from OTS or SLA $1.10 62-14160

Abstract trans. of Zhurnal Prikladnoi Khimii (USSR) 1945, v. 18, no. 3, p. 101-111, 121-125, 175-176, 184-190.

DESCRIPTORS: *Chemistry, Abstracting, Periodicals, Indexes, Acetones, Chlorides, Synthesis, Plants, Oils, Coal, Coal tar, Chemical analysis.

Contents:
Applied chemistry in the Academy of Sciences, by O. E. Zvyagintsev and A. E. Porai-Koshits
Continuous method of preparation of chloracetone, by E. A. Shilov and G. V. Kupinskaya
Chemical composition of oil from Lappula echinata Gilb, by V. I. Esafov and others
The nature of coals and the composition of primary tar, by R. R. Galle.

SOVIET CHEMICAL ARTICLES: [SELECTED] TRANSLATIONS. 29 Dec 61 [24]p. 18 refs. JPRS: 11702.
Order from OTS or SLA $2.60 62-15364

Trans. of #Zhurnal Obshchei Khimii (USSR) 1961, v. 31, no. 6, p. 1763-1773 and 2012-2013.
##Another trans. of p. 1770-1773 is available from ATS $6.35 as ATS-00N55R [1961] 4p.

DESCRIPTORS: *Chemistry, Literature, *Phosphorus acids, Acids, Esters, Alkyl radicals, Phosphites, *Saponification, Esterification, Synthesis, Water, Alcohols, Phosphates.

Contents:
Saponification of complete esters of phosphorous acid with pure water, by M. G. Imaev
Saponification of trialkylphosphites in the presence of inorganic and organic bases, by M. G. Imaev
##Transesterification of trialkylphosphites by aliphatic alcohols, by M. G. Imaev
Esters of phosphorous acids with different kinds of radicals. III. Synthesis of alkylphosphates with different kinds of radicals, by F. L. Maklyaev and others.

SOVIET CHEMICAL TRANSLATIONS. 15 Nov 61 [24]p. 28 refs. JPRS: 11071.
Order from OTS or SLA $2.60 62-13546

Trans. of #Zhurnal Obshchei Khimii (USSR) 1961, v. 31, no. 7, p. 2367-2380.

DESCRIPTORS: *Chemistry, Literature, Alkyl radicals, Phosphonic acids, Esters, *Methyl radicals, *Phosphinous acids, Phosphites, Phosphines, Esterification, Synthesis, Glycols, Alcohols, Amides, Phosphorous acids.

Contents:
Reesterification of methylphosphonites, by K. A. Petrov and others
Reesterification of the monomethyl ester of methylphosphinous acid by glycols, by K. A. Petrov and others
Synthesis of dialklacylphosphites and alkylacylphosphinites, by K. A. Petrov and others
Synthesis of esters of phosphorous and phosphinous acids by alcoholysis of their amides, by K. A. Petrov and others.

Margolin, D. L. and Rudakov, G. A.
RESULTS OF THE COMPETITION FOR THE BEST WORKS OF THE CENTRAL BOARD OF THE ALL-UNION CHEMICAL SOCIETY IMENI D. I. MENDELEEV FOR 1959. 8 Jan 62 [17]p. JPRS: 11920.
Order from OTS or SLA $1.60 62-15484

Trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1961 [v. 6] no. 1, p. 102-107.

DESCRIPTORS: *Chemistry, Chemical industry, Chemical engineering, Industrial plants.

Masina, M. P.
OVER ENIGE CONDENSATIEREACTIES IN AANWEZIGHEID VAN KATALYSATORS (Some Condensation Reactions in the Presence of Catalysts) tr. by G. J. M. Fritschy. 13p. 11 refs. MTWL: 331. (text in Dutch).
Order from OTS or ETC $1.85 61-17925

Trans. of Zhurnal Obshchei Khimii (USSR) 1938, v. 8, p. 1264-1271.

DESCRIPTORS: *Condensation reactions, Nickel catalysts, *Cyclohexanols, Cyclohexanones, Cyclohexenes

Rathman, F. F.
ABSORPTION OF PROPYLENE AND CYCLOPROPANE BY MEANS OF SOLUTIONS OF SULPHURIC ACID. 8p. 11 refs. MTWL: 161.
Order from OTS or ETC $1.55 61-17847

Trans. of Zhurnal Obshchei Khimii (USSR) 1937, v. 7, no. 1, p. 14-17.

DESCRIPTORS: *Propenes, *Sulfuric acid, Solutions, Absorption.

Zhuravlev, V. F. and Tempel'man, R. G.
ENKELE VRAAGSTUKKEN BETREFFENDE DE CHEMIE VAN ALUMINATEN MET EEN HOOG ALUMINIUM GEHALTE (Problems of the Chemistry of High-alumina Aluminates). 9p. 12 refs. MTWL: 258. (text in Dutch).
Order from OTS or ETC $1.55 61-17886

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 7, p. 649-652.

DESCRIPTORS: *Aluminates, Aluminum, Fluorides, Sintering.

Analytical Chemistry

Bogdanchenko, A. G.
OVER DE TIJDSDUUR VAN DE ANALYSE IN CHEMISCHE LABORATORIA (Duration of Analyses in Chemical Laboratories) 6p. MTWL: 165. (text in Dutch).
Order from OTS or ETC $1.55 61-17852

Trans. of Zavodskaya Laboratoriya (USSR) 1948, v. 14, p. 749-750.

DESCRIPTORS: Chemical analysis, Time, *Metallurgical analysis, Standardization.

Bondarenko, M. M., Krolevets, S. M., and Belyaeva, A. P.
EEN VERSNELDE METHODE VOOR DE BEPALING VAN ZWAVEL IN STEENKOOL EN COKES (An Accelerated Method for the Determination of Sulfur in Coal and Coke) 6p. MTWL: 164. (text in Dutch).
Order from OTS or ETC $1.55 61-17851

Trans. of Zavodskaya Laboratoriya (USSR) 1948, v. 14, p. 991-992.

DESCRIPTORS: *Coal, *Coke, Chemical analysis, *Sulfur, Determination.

Budevski, O. and Krasnobaeva, N.
SEPARATION OF STRONTIUM FROM CALCIUM BY ION-EXCHANGE IN THE PRESENCE OF COMPLEX III (Otdelenie Strontsiya ot Kal'tsiya Putem Ionnogo Obmena v Prisutstvii Kompleksona 3). 10 Mar 61 [8]p. 4 refs. JPRS: 4444.
Order from OTS or SLA $1.10 62-19288

Trans. of Bulgarska Akademiya na Naukite. Doklady (Bulgaria) 1960, v. 13, no. 1, p. 67-70.

DESCRIPTORS: *Strontium, *Calcium, Separation, Ion exchange, Chemical equilibrium, *Ethylenedinitrilo tetraacetates, Acetic acids.

On the basis of experiments, a pH = 5.1 ±0.1, at a ethylenediaminetetraacetic acid (EDTA) concentration of 0.02 M, was chosen as the optimal value for separation. At lower pH values the elution of the calcium proceeds slowly at the expense of eluting liquid. Above pH=5.4 there exists the danger of the elution of strontium.

Erlenmeyer, H., Hahn, H. von, and Sorkin, E.
A PAPER-CHROMATOGRAPHIC SEPARATION AND DETERMINATION OF THE ALKALI-ALKALINE EARTH IONS. 1962, 4p.
Order from K-H $5.00 K-H 9188-c

Trans. of Helvetica Chimica Acta (Switzerland) 1951, v. 34, p. 1419-1421.

DESCRIPTORS: *Paper-chromatography, Separation, Determination, *Alkaline earths, Ions, Alkali metals.

Eschle, K.
SPECTROPHOTOMETRIC DETERMINATION OF NICOTINE. 1962, 7p.
Order from K-H $8.75 K-H 9929-a

Trans. of Mitt[eilungen] aus dem Gebiete der Lebensmitteluntersuchungen und Hygiene (Switzerland) 1959, v. 50, p. 258-263.

DESCRIPTORS: *Nicotine, Determination, Spectrophotometers.

Filk, Hermann, Sturmer, Egon, and Loeser, A.
THE INVESTIGATIONS ON THE CONTENT OF NICOTINE IN TOBACCO SMOKE. 1962, 7p.
Order from K-H $8.75 K-H 3225-b

Trans. from Arzneimittel-Forschung (West Germany) 1954 [v. 4] no. 6.

DESCRIPTORS: *Smokes, *Tobacco, *Nicotine, Chemical analysis.

Graevskaya, R. I. and Smirnov, O. K.
DE ANALYSE VAN HOOGMOLECULAIRE ALIPHATISCHE AMINEN (The Analysis of the Higher Aliphatic Amines) 8p. MTWL: 243. (text in Dutch).
Order from OTS or ETC $1.55 61-17903

Trans. of Zavodskaya Laboratoriya (USSR) 1948, v. 14, p. 1430-1433.

DESCRIPTORS: Aliphatic compounds, *Amines, Chemical analysis, Acetic anhydrides, *Titration.

Korshun, M. O., Gelman, N. E., and Sheveleva, N. S.
SIMULTANEOUS MICOR-DETERMINATION OF CARBON, HYDROGEN AND HALOIDS IN ORGANIC COMPOUNDS, tr. by G. N. Kasachkoff and G. F. Hill. Rept. 15 on Rapid Methods of Micro-elementary Analysis. 5 Jan 62 [12]p. 14 refs. AOMC Trans. nr. 3-62.
Order from OTS or SLA $1.60 62-15431

Trans. of #Zhurnal Analit[icheskoi] Khimii (USSR) 1958, v. 13, no. 6, p. 695-701.
Another trans. is available from CB $7.50

DESCRIPTORS: *Organic compounds, *Carbon, *Hydrogen, *Halides, Microchemistry, Microanalysis, Determination.

Korshun, M. O. and Klimova, V. A.
SNELLE METHODEN VOOR MICRO-ELEMENTAIR ANALYSE. I. DE BEPALING VAN C EN H IN STOFFEN DIE C, H EN O BEVATTEN (Rapid Methods for Microelementary Analysis. I. Determination of Carbon and Hydrogen in Samples, Containing Carbon, Hydrogen and Oxygen). 11p. 16 refs. MTWL: 163. (text in Dutch)
Order from OTS or ETC $1.55 61-17849

Trans. of Zhurnal Analiticheskoi Khimii (USSR) 1947, A trans. in English is available from LC or SLA mi$2.40 ph $3.30 as 60-13722, DSIR LLU M. 1019 [1960] 11p.

DESCRIPTORS: *Microanalysis, *Carbon compounds, Hydrogen, Oxygen, Carbon, Determination.

Luzina, G. S.
DE BEPALING VAN KLEINE HOEVEELHEDEN FLUOR DOOR AMPEROMETRISCHE TITRATIE (Determination of Small Quantities of Fluor by Amperometric Titration) 6p. 5 refs. MTWL: 291. (text in Dutch).
Order from OTS or ETC $1.55 61-17965

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, p. 1412-1414.

DESCRIPTORS: *Electrochemistry, Chemical analysis, Determination, *Fluorine, Thorium compounds, Fluorides.

Marushkin, M. N. and Belen'kaya, A. P.
QUANTITATIEVE BEPALING VAN ISOBUTEEN IN MENGSELS MET n-BUTENEN EN BUTADIEEN (Quantitative Determination of Isobutylene in Mixtures with Butylenes and Butadiene). 13p. 6 refs. MTWL: 403. (text in Dutch).
Order from OTS or ETC $1.85 61-32004

Trans. of Zhurnal Analiticheskoi Khimii (USSR) 1950, v. 5, p. 358-364.

DESCRIPTORS: *Butenes, *Determination, Chemical analysis, Mixtures.

Yuasa, Toshimi.
GAS IONS, FOR EXAMPLE, OF SEMICONDUCTORS, SEMIMETALS AND METALS. Pt. 1 of A Research on Gas Ions by a Quantum Analizer. [1961] [6]p. 11 refs.
Order from SLA $1.10 62-10625

Trans. of [Nihon Kagaku Zasshi] (Japan) 1960, v. 81, p. 1643-1645.

DESCRIPTORS: *Gases, *Ions, *Ion sources, Semiconductors, Metals, Electrodes, Atoms, Molecules, Polymers, Spectrographic analysis.

A Mattauch type double focussing quantum analizer was used. Some poly-atomic molecular ions were produced by high frequency sparks between the two specimen electrodes which were made of the object elements. Semiconductors such as carbon, silicon, germanium, selenium and tellurium and semimetals such as antimony form one-valent molecular ions, while metals did not form such one-valent molecular ions. Multivalent single atom ions were always detected in all the elements. Ions produced by the spark between two different elements were found to be the same ones as were produced from the two sets of sparks between electrodes each consisting of a single element. Some quantum spectral photographs were taken to examine the change of the thermal ion emission effect for the alumina-covered tungsten wire or platinum wire with increasing filament temperature. In the case of platinum, spark could produce multivalent single atom ions such as Pb^{+} to Pb^{+++}; while thermal ion emission could produce only single valent single atom ions such as impure Na^{+} and K^{+} ions. Even Pb^{+} ion was not detected. According to this result, the mechanism of ion formation by spark process was discussed relating to thermal ion emission effects. Poly-atom molecular ion formation was discussed in relation to the nature of bonding in the solids. (Author)

Inorganic Chemistry

Müller-Römer, Johannes.
PROCESS FOR THE PREPARATION OF A COARSELY-CRYSTALLINE AND ABRASION-RESISTANT SODIUM CARBONATE. [1961] 4p. 1 ref.
Order from OTS or SLA $1.10 62-10681

Trans. of German patent 1,076,651, by Chemische Fabrik Kalk Gesellschaft with limited responsibility, appl. 9 Oct 58, pub. 3 Mar 60.

DESCRIPTORS: *Sodium compounds, *Carbonates, Preparation, Crystallization, Evaporation, Abrasion, Resistance.

A process is proposed for the preparation of a coarsely-crystalline sodium carbonate of high abrasion-resistance by evaporation of a sodium carbonate solution to a crystalline mash with a water content in reference to the sodium carbonate present in it of less than 50 wt-% and calcining the sodium carbonate monohydrate separated from this mash. The process is characterized by the addition to the sodium carbonate solution before reaching the saturation point of an alkali chloride, especially sodium chloride, or a mixture of alkali chlorides in an amount corresponding to 10 to 15 wt-% of the amount of sodium carbonate contained in the solution.

Spitzin, V. I., Nesmeyanova, G. M., and Kanevskii, E. A.
SOME THERMODYNAMIC AND KINETIC QUESTIONS RELATED TO SOLUTIONS OF UO_2 IN ACID MEDIA. [1961] [12]p. (3 refs. omitted) 7 refs.
Order from OTS or SLA $1.60 62-10463

Trans. of #Zhurn[al] Neorgan[icheskoi] Khim[ii] (USSR) 1960, v. 5, no. 9, p. 1938-1942.

DESCRIPTORS: *Uranium compounds, *Oxides, Solutions, Solubility, *Sulfuric acid, Acids, Reaction kinetics, Thermodynamics, Oxidation-reduction reactions, Oxidizers, Nuclear isobars, Potential theory.

Isobaric potentials for processes of dissolution of UO_2, UO_3 and U_3O_8 in solutions of sulfuric acid of various concentrations, taking into account complex formation, were calculated using available literature information. The ΔZ and ΔZ^{O} values for these processes were compared with the experimental data obtained for dissolution of UO_2 and U_3O_8 in sulfuric acid concentrations of 150 to 1000 g/liter range. It was established that experimental results are in agreement with the calculated thermodynamic values. These values of isobaric potentials for processes of dissolution of UO_2, UO_3 and U_3O_8, in particular in dilute acid solutions, show that these processes, in case of UO_2 and U_3O_8, may be advantageously carried out in presence of oxidation agents. With this, comparison of experimental data, pertaining to U_3O_8 dissolution, with the normal oxidation-reduction potentials of oxidizers does not show any linear dependence between them. The influence of temperature on dissolution of uranium oxides under conditions described in this investigation testifies to a dominant influence of kinetic factors in using some of these oxidizers. (Author)

Organic Chemistry

Andreev, D. N. and Petrov, A. D.
SYNTHESE EN EIGENSCHAPPEN VAN MONO- EN POLYALKYLNAPHTALENEN. III. (Synthesis and Properties of Mono- and Polyalkylnaphtalenes. Pt. III.) 10p. 3 refs. MTWL: 237. (text in Dutch).
Order from OTS or ETC $1.55 61-17911

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 134-138.

DESCRIPTORS: *Naphthalenes, *Alkyl radicals, Synthesis, X-ray diffraction analysis.

Bogdanov, I. F.
ACADEMICIAN ALEKSEI EVGRAFOVICH FAVORSKII, STALIN PRIZE LAUREATE. [1961] 4p. 14 refs.
Order from OTS or SLA $1.10 62-10889

Condensed trans. of Uspekhi Khimii (USSR) 1941, v. 10, no. 6, p. 654-661.

DESCRIPTORS: *Rubber, *Isoprene, Acetylenes, Isomeric transitions, Polymers.

Bunyatyan, G. Kh. and Kamalyan, G. V.
OVER HET MECHANISME VAN DE OXYDATIEVE WERKING VAN DE COMBINATIE COLAMINE + KOPER BIJ AUTO-OXYDATIE VAN VETTEN (The Mechanism of the Proöxidant Action of the Combination of Colamine with Copper During the Autoxidation of Fats) tr. by K. van het Reve. 6p. 6 refs. MTWL: 373. (text in Dutch).
Order from OTS or ETC $1.55 61-32036

Trans. of Biokhimiya (USSR) 1950, v. 15, no. 3, p. 283-286.

DESCRIPTORS: *Fats, *Oxidation, Copper, Amines.

Chelnokova, G. N., Rafikov, S. R. and Korshak, V. V.
OVER DE KINETICA DER POLYAMIDEVORMING (The Kinetics of the Polyamidation Reaction) tr. by G. J. M. Fritschy. 6p. 7 refs. MTWL: 327. (text in Dutch).
Order from OTS or ETC $1.55 61-17941

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 64, p. 353-355.

DESCRIPTORS: *Amides, Polymers, Reaction kinetics

Elagina, N. V. and Zelinskii, N. D.
DE BEREIDING VAN GEMENGDE PINACOLEN DOOR GELIJKTIJDIGE REDUCTIE VAN TWEE KETONEN (The Preparation of Pinacols of Mixed Types by Simultaneous Reduction of Two Ketones) tr. by G. J. M. Fritschy. 4p. 7 refs. MTWL: 362 (text in Dutch).
Order from OTS or ETC $1.40 61-32041

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 71, p. 293-294.

DESCRIPTORS: *Ketones, Reduction, Preparation.

Fournet, André and Lemoine, Hubert.
VINYLOXYARENESULFONIC DERIVATIVES. [1961] 7p.
Order from OTS or SLA $1.10 62-10698

Trans. of French patent 1,228,861, int. cl. C07c -C08f, by Société des Usines Chimiques Rhône-Poulenc, appl. 11 Feb 59, issued 21 Mar 60, pub. 2 Sep 60.

DESCRIPTORS: *Sulfonates, *Vinyl radicals, *Alkoxy radicals, *Phenyl radicals, Synthesis, Sodium compounds, Acrylonitriles, Methyl radicals, Methanes, Acrylic resins, Copolymerization, Polymerization, Polymers.

A new class of products is proposed, represented by the general formula

$$CH_2=CH\text{-}O\text{-}Ar\text{-}(SO_3R)_n$$

in which Ar represents an aromatic radical which may be substituted by an alkyl, cycloalkyl, or aryl radical or by a halogen atom, R represents a hydrogen atom, a metal, or an organic radical, and n has the value 1, 2, or 3. Homopolymers and copolymers can be prepared from these new products. The vinyloxyarenesulfonic derivatives are prepared by sulfonation of B-haloethoxyarenes. The B-haloethoxy arenesulfonic acids obtained, subjected to the action of an aqueous solution of an alkaline hydroxide, lose a molecule of halogenated acid and are transformed into alkaline salts of vinyloxyarenesulfonic acids, from which the corresponding acids or esters can be prepared.

Grigorovskii, A. M., Berkov, A. I. and others.
REDUCTIE-ALKYLERING VAN AMMONIAK EN AMINEN MET ALDEHYDEN EN KETONEN. I. BEREIDING VAN AETHYLAMINEN UIT ACEETALDEHYDE (Reduction Alkylation of Ammonia and Amines with Aldehydes and Ketones. I. Preparation of Ethylamines from Acetaldehyde) 11p. 22 refs. MTWL: 166. (text in Dutch).
Order from OTS or ETC $1.55 61-17853

Trans. of Promyshlennost'Organicheskoi Khimii (USSR 1940, v. 7, [no. 12] p. 671-674.
An abstract trans. is available in English from OTS or SLA $1.10 in 62-14100 [1961] 2p.

DESCRIPTORS: *Amines, *Ethyl radicals, Acetaldehydes, Preparation, Ammonia, Ketones.

Grigorovskii, A. M. and Margolina, R. S.
REDUCTIE-ALKYLERING VAN AMMONIAK EN AMINEN MET ALDEHYDEN EN KETONEN. II. DE BEREIDING VAN BUTYLAMINEN UIT n-BUTYRALDEHYDE (Reduction-alkylation of Ammonia and Amines with Aldehydes and Ketones. II. The Preparation of Butylamines from Butyraldehyde) 7p. 11 refs. MTWL: 159. (text in Dutch).
Order from OTS or ETC $1.55 61-17850

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1945, v. 18, no. 11-12, p. 644-646.
Abstract trans. in English is available from OTS or SLA $1.10 in 62-14165 [1961] 7p.

DESCRIPTORS: *Amines, *Butyl radicals, Aldehydes, Preparation, Ammonia, Ketones.

Ioffe, B. V.
EEN NAUWKEURIGE BEPALING VAN DE CONCENTRATIE VAN AROMATISCHE KOOLWATERSTOFFEN VOLGENS DE METHODE DER RELATIEVE DISPERSIE (Exact Determination of Aromatic Hydrocarbons by the Method of Relative Dispersion) tr. by G. J. M. Fritschy. 12p. 9 refs. MTWL: 363. (text in Dutch).
Order from OTS or ETC $1.85 61-32042

Trans. of Zhurnal Analiticheskoi Khimii (USSR) 1949, v. 4, p. 237-243.

DESCRIPTORS: *Hydrocarbons, Benzenes, *Refractive properties.

Ioffe, B. V.
EEN NIEUWE OPTISCHE METHODE VOOR DE BEPALING VAN AROMATISCHE KOOLWATERSTOFFEN IN MENGSELS MET PARAFFINEN EN NAFTENEN (A New Optical Method for the Determination of Aromatic Hydrocarbons in Mixtures with Alkanes and Naphtenes) 24p. 9 refs. MTWL: 254. (text in Dutch).
Order from OTS or ETC $1.93 61-17889

Trans. of Zhurnal Obshchei Khimii (USSR) 1946, v. 16, no. 7, p. 1121-1133.

DESCRIPTORS: *Benzenes, Determination, *Refractive properties, Naphthenes, Mixtures.

Irisov, A. S.
FREE ENERGY OF FORMATION OF MOLECULES AND THE ANTI-KNOCK VALUE OF ALKANES, ALKENES AND ALKYNES. 16p. 6 refs. MTWL: 232.
Order from OTS or ETC $1.85 61-17906

Trans. of Neftyanoe Khozyaistvo, (USSR) 1948, v. 26, no. 12, p. 25-32.
Another trans. is available from SLA as RT-3918.

DESCRIPTORS: *Hydrocarbons, Combustion, *Antiknock, Detonation.

Katibnikov, M. A. and Ermolenko, I. N.
ABSORPTION AND LUMINESCENCE SPECTRAL STUDY OF DYE-POLYELECTROLYTE INTERACTION IN SOLUTIONS. I. AQUEOUS SOLUTIONS OF RHODAMINE 6G IN THE PRESENCE OF METH-ACRYLIC ACID. [1961] 15p. (9 refs. 3 figs. omitted) 6 refs.
Order from OTS or SLA $1.60 62-10663

Trans. of Vysokomolek[ulyarnye] Soedin[eniya] (USSR) [1961] v. 3, no. 1, p. 105-112.

DESCRIPTORS: *Dyes, Organic compounds, Acrylic acids, Polymers, Methanes, Electrolytes, Absorption spectra, Luminescence, Polarization, Optics, Pigments.

A study was made of the influence of the concentration of polymethacrylic acid on absorption spectra, lumines cence spectra, intensity of luminescence, and also the polarization of luminescence of aqueous solutions of rhodamine 6G, containing dissolved polymethacrylic acid. The increase of the concentration of polymeth-acrylic acid in solution from 0 to 2.16 x 10^{-3}% causes an increase in intensity of the short-wave (dimeric) band of the absorption spectrum of the dye and a sudder fall of the intensity of luminescence: there is noticed a shift of the maximum to the short-wave part of the spectrum. A further addition of polymethacrylic acid to 15 x 10^{-3}% causes a decrease of the dimeric absorption band to a value approximately corresponding to the absorption spectrum of the aqueous solution of the dye of a given concentration which does not contain polymeth-acrylic acid. There now begins a flare-up of luminescence, accompanied by a reverse displacement of the maximum of the luminescence band into the long-wave region. The degree of polarization increases suddenly and reaches its maximum value at a concentration of polymethacrylic acid of 199 x 10^{-3}%. The monomeric maximum of the absorption spectrum grows and shifts to the long-wave region of the spectrum. (Author)

Kazanskii, B. A., Liberman, A. L., and others.
EEN LABORATORIUMMETHODE TOT SNELLE HYDRERING VAN OLEFINEN BIJ ATMOSFERISCHE DRUK (A Laboratory Method for Rapid Hydrogenation of Olefins at Atmospheric Pressure) 8p. 4 refs. MTWL: 412. (text in Dutch).
Order from OTS or ETC $1.55 61-32000

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 71, no. 3, p. 477-480.

DESCRIPTORS: *Ethylenes, *Hydrogenation, Platinum Catalysts.

Kazarnovskii, S. N.
PRODUCTION OF SYNTHETIC ACETIC ACID FROM ACETYLENE. [1961] 3p. 21 refs.
Order from OTS or SLA $1.10 62-10899

Condensed trans. of Promyshlennost' Organicheskoi Khimii (USSR) 1940, v. 7, no. 10, p. 562-571.

DESCRIPTORS: *Acetic acids, *Acetaldehydes, Synthesis, Oxidation, *Acetylenes, Chemical reactions.

Khmelnitskii, Yu. L., Dolagudin, A. I. and others.
CATALYTIC ALKYLATION OF BENZENE. 16p. 7 refs. MTWL: 234.
Order from OTS or ETC $1.85 61-17908

Trans. of Neftyanoe Khozyaistvo, (USSR) 1947, v. 25, no. 5, p. 42-47.
Another trans. is available from SLA as RT-1472.

DESCRIPTORS: *Benzenes, *Alkyl radicals, Chemical reactions, Catalysis, Phosphoric acids.

Knunyants, I. L., Rogovin, Z. A. and others.
ONDERZOEKINGEN OP HET GEBIED DER POLYMERISATIE VAN INSTABIELE RINGVERBINDINGEN. I. ONDERZOEK VAN DE POLYMERISATIE VAN CAPROLACTAAM (Polymerization of Unstable Cyclic Compounds. I. Polymerization of Caprolactam) tr. by G. J. M. Fritschy. 9p. 17 refs. MTWL: 333. (text in Dutch).
Order from OTS or ETC $1.55 61-17927

Trans. of Zhurnal Obshchei Khimii (USSR) 1947, v. 17, p. 987-991.

DESCRIPTORS: *Heterocyclic compounds, *Polymerization, Reaction kinetics, Nitrogen compounds.

Kozlov, N. S.
BOILING POINT OF THE AROMATIC HYDROCARBONS 15p. 17 refs. MTWL: 287.
Order from OTS or ETC $1.85 61-17977

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 9, p. 40-46.

DESCRIPTORS: Hydrocarbons, *Boiling, *Temperature, Molecular structure, *Benzenes, Alkyl radicals.

Krauze, M. V., Nemtzov, M. S. and Soskina, E. A.
BESTUDERING VAN DE PYROGENETISCHE CONDENSATIEREACTIES VAN KOOLWATERSTOFFEN. III. KINETICA EN MECHANISME DER POLYMERISATIE VAN PROPEEN. (Pyrogenetic Reactions of Polymerization of Hydrocarbons. III. Kinetics and Mechanism of Propylene Polymerization). 8p. 11 refs. MTWL: 239. (text in Dutch).
Order from OTS or ETC $1.85 61-17913

Trans. of Zhurnal Obshchei Khimii (USSR) 1935, v. 5, p. 356-360.

DESCRIPTORS: Hydrocarbons, *Polymerization, Condensation reactions, *Propenes, Reaction kinetics.

Kravchenko, V. M.
PHASENEVENWICHT VAN PARAFFINEN. BINAIRE EN TERNAIRE SYSTEMEN VAN N-HEPTAAN, N-OCTAAN EN N-DECAAN (Phase Equilibrium of Paraffins. Binary and Ternary Systems Containing Heptane, Octane, and Decane) 14p. 5 refs. MTWL: 283 (text in Dutch).
Order from OTS or ETC $1.85 61-17983

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 5, p. 491-498.
A trans. in English is available from ATS as RJ-5.

DESCRIPTORS: *Heptanes, *Octanes, *Phase studies, Chemical equilibrium.

Kuz'minskii, A. S.
OXIDATION OF RUBBER POLYMERS. [1961] 4p. 27 refs.
Order from OTS or SLA $1.10 62-10890

Condensed trans. of Usp[ekhi] Khim[ii] (USSR) 1941, v. 10, no. 7, p. 825-844.

DESCRIPTORS: *Polymers, *Rubber, Oxidation, Oxygen, Diffusion, Sulfur, Vulcanization, Rubber plasticizers.

Lavrovskii, K. P. and Brodskii, A. M.
HET KRAKEN VAN AETHAAN EN PROPAAN BIJ ZEER SNELLE WARMTE-UITWISSELING (The Cracking of Ethane and Propane under Conditions of Heat Exchange) 9p. 9 refs. MTWL: 409. (text in Dutch).
Order from OTS or ETC $1.55 61-17996

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 72, no. 4, p. 745-748.

DESCRIPTORS: *Ethanes, *Propanes, Decomposition, *Pyrolysis, Heat transfer.

Nemtsov, M. S., Nizovkina, T. V., and Soskina, E. A.
INVESTIGATION OF PYROGENETIC HYDROCARBON CONDENSATION REACTIONS. PART 7. THERMOPOLYMERIZATION OF N-OCTENE. 25p. 19 refs. MTWL: 399.
Order from OTS or ETC $1.93 61-32017

Trans. of Zhurnal Obshchei Khimii (USSR) 1938, v. 8, no. 14-15, p. 1314-1324.

DESCRIPTORS: Hydrocarbons, Polymerization, *Condensation reactions, *Octenes, Reaction Kinetics.

Nesmeyanov, A. N. and Segalevich, A. E.
INTERACTION OF DIAZOACETIC ESTER WITH STANNIC CHLORIDE AND FERRIC CHLORIDE, tr. by A. Magrath. [1961] [12]p. 11 refs. [TRC] Trans. no. 1054; [DSIR NLL] M. 4639.
Order from OTS or SLA $1.60 62-15711

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1942, no. 1, p. 8-13.

DESCRIPTORS: *Azo compounds, *Acetates, *Ethyl radicals, *Iron compounds, *Tin compounds, Chlorides, Chemical reactions, Acetic acids.

Enolic derivatives of diazoacetic ester, resulting from the interaction of the latter with stannic chloride in a petroleum ether medium, are described; the properties of these derivatives are indicated. A scheme for the course of the reaction is given. (Author)

Nesmeyanov, A. N. and Reutov, O. A.
ONDERZOEK VAN DE ONTLEDING VAN ARYLAZOCARBONZURE ZOUTEN (Research of the Decomposition of Aryldiazonium Salts). 20p. 18 refs. MTWL: 321 (text in Dutch).
Order from OTS or ETC $1.85 61-17935

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1949, no. 6, p. 611-622.
DESCRIPTORS: *Azoradicals, *Benzenes, Decomposition, *Free radicals, Liquids, Reaction kinetics.

Nikolaev, A. A.
THEORIE VAN DE RING-ISOMERISATIE (Theory of the Ring-isomerization) tr. by G. J. M. Fritschy. 13p 20 refs. MTWL: 313. (text in Dutch).
Order from OTS or ETC $1.85 61-17949

Trans. of Zhurnal Obshchei Khimii (USSR) 1936, v. 6, p. 1587-1592.

DESCRIPTORS: *Molecular isomerism, *Cyclobutanes, Alcohols.

Pakshver, A. B. and Kokhomskaya, T. N.
EIGENSCHAPPEN VAN OPLOSSINGEN VAN POLYAMIDE HARSEN (Properties of Solutions of Polyamide Resins) tr. by G. J. M. Fritschy. 13p. 10 refs. MTWL: 326. (text in Dutch).
Order from OTS or ETC $1.85 61-17940

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1950, v. 23, p. 837-846.

DESCRIPTORS: *Amides, *Resins, Polymers, Solutions, Physical properties.

Petrov, A. D. and Kaplan, E. P.
SYNTHESE EN PHYSISCHE EIGENSCHAPPEN VAN VERTAKTE KOOLWATERSTOFFEN MET 22 KOOLSTOFATOMEN (Synthesis and Physical Properties of C22-branched Hydrocarbons) 11p. 5 refs. MTWL: 261. (text in Dutch).
Order from OTS or ETC $1.55 61-17874

Trans. of Akademiya Nauk SSSR Otdelenie Khimicheskikh Nauk. Izvestiya, 1949, no. 5, p. 539-544.

DESCRIPTORS: *Hydrocarbons, Synthesis, *Physical properties.

Pigulevskii, V. V.
GEKOPPELDE OXYDATIE VAN NIET-GRENSKOOLWATERSTOFFEN EN ALDEHYDEN. OXYDATIE VAN OCTEEN MET BENZALDEHYDE EN ACEETALDEHYDE (Conjugated Oxidation of Unsaturated Hydrocarbons and Aldehydes. Oxydation of Octene with Acet-Aldehyde or Benzaldehyde). 12p. (foreign text included). 14 refs. MTWL: 150. (text in Dutch).
Order from OTS or ETC $1.85 61-17872

Trans. of Zhurnal Obshchei Khimii (USSR) 1934, v. 4, p. 616-621.

DESCRIPTORS: Acetaldehydes, Benzaldehydes, *Octenes, *Oxidation, Hydrocarbons, Aldehydes.

Pospekhov, D. A.
DER KUPFER-ZINK-CHROM KATALYSATOR FUER DIE METHANOLSYNTHESE (The Copper-Zinc-Chromium Catalysts for the Synthesis of Methanol) tr. by I. van Erkelens-Klowatzki and G. J. M. Fritschy. 13p 43 refs. MTWL: 231. (text in German).
Order from OTS or ETC $1.85 61-17905

Trans. of Akademiya Nauk URSR [Kiev]. Instytut Khimii. Zapysky, 1938, v. 5, p. 507-515.

DESCRIPTORS: *Methanols, *Synthesis, Copper catalyst, Chronium catalyst, Zinc, *Catalysts.

Prokofiev, S.
NEW MOLECULAR COMPOUNDS OF ORTHOLOLUIDINE HYDROBROMIDE WITH BENZENE AND THIOPHENE. 6p. MTWL: 294.
Order from OTS or ETC $1.55 61-17968

Trans. of [Zhurnal Obshchei Khimii] (USSR) 1897, v. 29, no. 2, p. 87-90.

DESCRIPTORS: *Toluidines, *Benzenes, *Thiophenes, Hydrogen compounds, Bromides, Chemical reactions.

Rafikov, S. R. and Korshak, V. V.
ONDERZOEKINGEN OP HET GEBIED DER POLYCONDENSATIE. IV. DE VISCOSITEIT VAN OPLOSSINGEN VAN POLYAMIDEN (Investigations in the Field of the Polycondensation. IV. The viscosity of Solutions of Polyamides) tr. by G. J. M. Fritschy. 15p. 7 refs. MTWL: 328. (text in Dutch).
Order from OTS or ETC $1.85 61-17942

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1944, no. 6, p. 432-439.

DESCRIPTORS: *Condensation reactions, *Amides, Polymers, Viscosity.

Rafikov, S. R., Korshak, V. V., and Chelnokova, G. N.
ONDERZOEKINGEN OP HET GEBIED VAN DE HOOGMOLECULAIRE VERBINDINGEN. MEDEDELING XVIII OVER HET GEMIDDELDE MOLECULAIRGEWICHT VAN MENGSELS VAN POLYMEER-HOMOLOGEN (High Molecular Compounds. Contribution XVIII. The Average Molecular Weight of Polymer Homologs) tr. by G. J. M. Fritschy. 9p. 8 refs. MTWL: 330. (text in Dutch).
Order from OTS or ETC $1.55 61-17944

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1949, no. 1, p. 90-95.

DESCRIPTORS: *Polymers, *Molecular weight, Mixtures.

Rakovskii, E. V. and Burinova, O. A.
PRODUCTION OF HYDROGEN BY THE CONVERSION OF HYDROCARBONS WITH WATER VAPOUR, tr. by I. Gawronska. 22 Mar 61, 28p. 12 refs. Courtaulds Misc. Lit. 3287; [DSIR NLL] M. 3244.
Order from OTS or SLA $2.60 62-15246

Trans. of Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1941, v. 14 [no. 4/5] p. 449-465.
Another trans. is available from OTS or SLA $1.60 as 61-16917 [1961] 17p.; and an abstract trans. $1.60 in 61-20395 [1961] 12p.

For abstract see Technical Translations 6: 484, 1961.

DESCRIPTORS: *Hydrogen, Production, *Hydrocarbons, Decomposition.

Razumov, N. V.
CHEMISCHE AARD VAN NATUURLIJKE OLIEINHIBITOREN (Constitution of Natural Inhibitors Present in Petroleum). 13p. 12 refs. MTWL: 242. (text in Dutch).
Order from OTS or ETC $1.85 61-17902

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 5, p. 37-42.

DESCRIPTORS: Mineral oils, *Hydrocarbon, Decomposition, *Oxidation inhibitors, Phenols.

Rogovin, Z. A., Strepikheev, A., and Prokof'eva, A.
ONDERZOEKINGEN OP HET GEBIED VAN DE POLYMERISATIE VAN INSTABIELE RINGVERBINDINGEN. III. ONDERZOEK VAN DE SYNTHESEOMSTANDIGHEDEN EN DE EIGENSCHAPPEN VAN POLYMETHYLCAPROLACTAMEN (Polymerization of Unstable Cyclic Compounds. III. Conditions of Synthesis and Properties of the Polymethylcaprolactams) tr. by G. J. M. Fritschy. 9p. 6 refs. MTWL: 332. (text in Dutch).
Order from OTS or ETC $1.55 61-17926

Trans. of Zhurnal Obshchei Khimii (USSR) 1947, v. 17, p. 1321-1326.

DESCRIPTORS: *Heterocyclic compounds, *Polymerization, Reaction kinetics, Nitrogen compounds.

Shpital'nyi, A. S., Meos, E. A., and Koretskaya, A. I.
DE STRUCTUUR VAN ZOUTEN, GEVORMD UIT DIAMINEN EN DICARBONZUREN VAN DE ALIFATISCHE REEKS (The Structure of Salts from Diamines and Dicarboxylic Acids of the Aliphatic Series) tr. by G. J. M. Fritschy. 11p. 12 refs. MTWL: 335, (text in Dutch).
Order from OTS or ETC $1.55 61-17929

Trans. of #Zhurnal Obshchei Khimii (USSR) 1950, v. 20, p. 571-576.

DESCRIPTORS: *Amines, Aliphatic compounds, *Carboxylic acids, Salts, Structures, Resins.

Shuikin, N. I.
PREPARATION OF AROMATIC HYDROCARBONS FROM OIL BY CONTACT CATALYTIC METHODS. [1961] 9p. 37 refs
Order from OTS or SLA $1.10 62-10832

[Condensed] trans. of Uspekhi Khimii (USSR) 1946, v. 15, no. 3, p. 343-358.

DESCRIPTORS: *Hydrocarbons, Production, Petroleum, Gasoline, Kerosene, Pyrolysis, Decomposition, Dehydrogenation, Platinum, Catalysts, Alumina-nickel catalysts, Catalysis.

Smirnov, V. S. and Libman, K. A.
OVER DE OXYDATIE VAN OXIMEN VAN DE POLYMETHYLEENREEKS. VI. HET GEDRAG VAN CYCLOHEXANONOXIME TEN OPZICHTE VAN OXYDATIEMIDDELEN (Behavior of Polymethylene Oximes in Oxidation. VI. Behavior of Cyclohexanone Oxime) tr. by G. J. M. Fritschy. 4p. 2 refs. MTWL: 366. (text in Dutch).
Order from OTS or ETC $1.40 61-32045

Trans. of #Zhurnal Obshchei Khimii (USSR) 1950, v. 20, p. 329-330.

DESCRIPTORS: *Oximes, *Cyclohexanones, Oxidation.

Spasokukotskii, N. S.
MODERNE OPVATTINGEN OVER HET WEZEN VAN NITREERMENGSELS EN OVER HET MECHANISME VAN DE NITRERINGSREACTIE VAN AROMATISCHE VERBINDINGEN (Modern Views about the Nature of Nitrating Mixtures and the Mechanism of the Nitration of Aromatic Compounds). 34p. 45 refs. MTWL: 253. (text in Dutch).
Order from OTS or ETC $2.53 61-17893

Trans. of Uspekhi Khimii (USSR) 1948, v. 17, p. 55-73.

DESCRIPTORS: *Benzenes, *Nitration, Reaction kinetics.

Spryskov, A. A.
ONDERZOEK VAN DE SULFONERINGSREACTIE. XI. DE BEREIDING VAN HET MONOSULFONZUUR VAN BENZEEN MET BEHULP VAN OLEUM. (The Sulfonation Reaction. XI. The Preparation of the Monosulfonic Acid by Sulfonation of Benzene with Oleum) tr. by G. J. M. Fritschy. 10p. 21 refs. MTWL: 336. (text in Dutch).
Order from OTS or ETC $1.55 61-17930

Trans. of Zhurnal Obshchei Khimii (USSR) 1948, v. 18, p. 1370-1375.

DESCRIPTORS: *Benzenes, Sulfuric acid, *Sulfonic acids, Preparation.

Terent'ev, A. P. and Dombrovskii, A. V.
SULFONERING EN SULFONZUREN VAN ACIDOPHOBE VERBINDINGEN. VII. SULFONERING VAN ONVERZADIGDE KOOLWATERSTOFFEN (Sulfonation and Sulfonic Acids of Acidophobic Substances. VII. Sulfonation of Unsaturated Hydrocarbons) 8p. 7 refs. MTWL: 290. (text in Dutch).
Order from OTS or ETC $1.55 61-17980

Trans. of #Zhurnal Obshchei Khimii (USSR) 1949, v. 19, no. 8, p. 1467-1471.

DESCRIPTORS: Sulfonic acids, *Hydrocarbons, *Sulfonation, Cyclohexenes, Cyclohexanes, Camphanes, Styrenes.

Tilicheev, M. D. and Kachmarchik, Yu. M.
STANDARD CETANE (PROPERTIES OF STANDARD CETANE AND SEPARATION FROM IT OF PURE N-HEXADECANE). 17p. 7 refs. MTWL: 268.
Order from OTS or ETC $1.85 61-17881

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 1, p. 45-50.

DESCRIPTORS: *Hydrocarbons, *Preparation, Physical properties.

Topchiev, A. V. and Paushkin, Ya. M.
IMPORTANCE OF FLUORINE COMPOUNDS AS CATALYSTS IN ALKYLATION REACTIONS. 15p. 31 refs. MTWL: 235.
Order from OTS or ETC $.1.85 61-17909

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 6, p. 54-59.

DESCRIPTORS: Hydrocarbons, Benzenes, *Alkyl radicals, Fluorides, Boron compounds, *Catalysis, Chemical reactions.

Ushakov, S. N., Arbuzova, I. A., and Efremova, V. N.
DE COPOLYMERISATIE VAN ALLYLALCOHOL EN DERIVATEN ERVAN MET ZWAVELDIOXYDE (Copolymerization of Allyl Alcohol and its Derivatives with Sulfur Dioxide) 11p. 8 refs. MTWL: 285. (text in Dutch).
Order from OTS or ETC $1.55 61-17975

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1949, no. 5, p. 551-556.

DESCRIPTORS: Sulfur compounds, Dioxides, *Alkyl radicals, *Alcohols, *Polymerization.

Vargaftik, M. N., Moiseev, I. I., and Syrkin, Ya. K.
KINETICS OF THE OXIDATION OF CYCLOHEXENE BY PALLADIUM SALTS IN AQUEOUS SOLUTIONS. 14 Nov 61 [7]p. 4 refs.
Order from OTS or SLA $1.10 62-10682

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1961, v. 139, p. 1396-1399.

DESCRIPTORS: *Reaction kinetics, *Oxidation, *Cyclohexenes, *Cyclohexanones, *Palladium compounds, Quinones.

The kinetics of the oxidation of cyclohexene to cyclohexanone by Pd salts in aqueous solutions was studied in the temperature interval 7.0 to 30.3°C. The course of the reaction was judged by determining the concentration of quinone and hydroquinone, e.g., by measuring the redox potential of the quinone-hydroquinone system. The reaction rate depended neither on the hydrogen-ion concentration nor on the ionic strength of the solution. The existence of a proportionality between the oxidation rate and the concentrations of Pd salts and olefin is the first kinetic confirmation of the assumption that the reaction proceeds via the formation of a π-complex. The presence of a second order, absence of a salt effect and hydrogen-ion effect, is just as consistent with the assumption that the limiting stage is the formation of a π-complex as with the scheme according to which the formation of the complex is an equilibrium stage (assuming $K_{E_g} \ll 10^3$) and limits the decomposition of the π-complex. (See also 61-15471)

Yakubovich, A. Ya. and Lemke, A. L.
DE STRUCTUUR VAN NITROSYLCHLORIDE EN ZIJN CONDENSATIE-REACTIES MET OLEFINEN (The Structure of Nitrosyl Chloride and its Condensation Reaction with Olefins) 19p. 7 refs. MTWL: 375 (text in Dutch).
Order from OTS or ETC $1.85 61-32038

Trans. of #Zhurnal Obshchei Khimii (USSR) 1949, v. 19, no. 4, p. 649-659.

DESCRIPTORS: *Ethylenes, *Condensation reactions, Nitrogen compounds, Oxychlorides, Molecular structure.

Zamyatina, V. A. and Korshak, V. V.
ONDERZOEKINGEN OP HET GEBIED DER POLYCONDENSATIE. V. BEPALING DER EINDGROEPEN VAN POLYAMIDEN. (Investigations in the Field of the Polycondensation. V. Determination of Terminal Groups of Polyamides) tr. by G. J. M. Fritschy. 10p. 11 refs. MTWL: 329. (text in Dutch).
Order from OTS or ETC $1.55 61-17943

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1945, no. 5, p. 480-485.

DESCRIPTORS: *Condensation reactions, *Amides, Polymers, Viscosity, Molecular weight.

Zelinskii, N. D., Mikhailov, B. M., and Arbuzov, Yu. A.
THERMISCHE ONTLEDING VAN CYCLOHEXAAN-KOOLWATERSTOFFEN (Thermal Decomposition of the Cyclohexane Hydrocarbons) 14p. MTWL: 152. (text in Dutch).
Order from OTS or ETC $1.85 61-17866

Trans. of Zhurnal Obshchei Khimii (USSR) 1934, v. 4, p. 856-865.

DESCRIPTORS: Hydrocarbons, *Cyclohexanes, *Pyrolysis, Ethylenes.

Physical Chemistry

Adadurov, I. E.
KATALYTISCHE REACTIE ALS RESULTAAT VAN DE ACTIVERING VAN EEN VAN DE REACTIE-COMPONENTEN, DOOR STRALINGEN UITGAANDE VAN DE KATALYSATOR (Catalytic Reaction as a Result of the Activation of One of the Reaction-Components, by Radiation from the Catalyst) 17p. MTWL: 153. (text in Dutch).
Order from OTS or ETC $1.55 61-17863

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1931, v. 2, p. 130-141.

DESCRIPTORS: Catalysts, Alpha particles, Beta particles, *Quantum mechanics, *Chemical reactions.

Akimov, G. V.
ELECTROCHEMIE VAN BESCHERMENDE LAGEN (Electrochemistry of Protective Films) tr. by G. J. M. Fritschy and C. J. Guykers. 9p. 12 refs. MTWL: 215. (text in Dutch).
Order from OTS or ETC $1.55 61-17919

Partial trans. of Uspekhi Khimii (USSR) 1947, v. 16, p. 353-363.

DESCRIPTORS: *Metals, *Protective coverings, Electrochemistry, Electric potential, Polarization.

Apashev, M. D. and Malov, P. V.
EVAPORATION OF SINGLE FREE DROPLETS OF VARIOUS LIQUIDS WITH SMALL REYNOLDS NUMBER VALUES FOR THE STREAM FLOWING PAST THE DROPLETS. [1962] 5p. 23 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of Akademiya Nauk SSSR. [Otdelenie Tekhnicheskikh Nauk]. Izvestiya: Energetika i Avtomatika, 1960, no. 2, p. 185-191.

DESCRIPTORS: Liquids, Water, Ethanol, Ethyl ethers, Ethers, Benzine, Kerosene, Fuel oil, *Drops, *Evaporation, Temperature, Mass transfer, Gas flow, Jets, Fuels, Reynolds number.

Arvan, Kh. L. and Ivanova, N. V.
PHOTOCHEMICAL TRANSFORMATION OF DYES IN AMIDE ENVIRONMENT. [1961] 5p. (5 figs. omitted).
Order from OTS or SLA $1.10 62-10350

Trans. of #Zhurnal Fizicheskoi Khimii (USSR) 1961, v. 35, no 6 [p. 1215-1218.

DESCRIPTORS: *Dyes, *Photochemistry, Photochemical reactions, Thiazines, Formamides, Polymers, Amides, Films, Dyeing, Absorption spectra.

During exposure to light, a photochemical demethylation of methylene blue and azure occurs, and the formation of thionine is observed. Analogous effects can take place also in formamide and in dyed polyamide films. The bond of dyes with polyacrylic and polymethacrylic acids does not appear to be specific for the photochemical demethylation and it is possible to assume that photodemethylation is not limited to classes of thiazine dyes alone.

Buyanov, R. A., Zel'dovich, A. G., and Pilipenko, Yu. K.
SOME PROBLEMS OF THE TECHNOLOGY OF CATALYTIC PRODUCTION OF LIQUID PARA-HYDROGEN. 20 Dec 61 [14]p. 8 refs. FTD-TT-61-192; AD-269 150.
Order from OTS or SLA $1.60 62-15407

Unedited rough draft trans. of Khimicheskaya Promyshlennost' (USSR) 1961, no. 2, p. 105-108.

DESCRIPTORS: *Liquefied gases, *Hydrogen, Nuclear spins, Production, Catalysis, Laboratory equipment, Industrial equipment, Cryogenics, Catalysts, Nickel alloys, Chromium alloys, Iron compounds, Chromium compounds, Manganese compounds, Hydroxides.

Methods are proposed for the incorporation of catalytic reactors for the conversion of ortho-hydrogen to para-hydrogen in systems of hydrogen liquefiers. The optimum conditions are recommended for the operation of reactors. Several problems of the activation of catalysts, their poisoning and work life are analyzed.

Dobryanskii, A. F., Gutner, R., and Shchigelskaya, M.
HYDROLYSE VAN DICHLOORBUTANEN IN TEGENWOORDIGHEID VAN NATRIUMCARBONAAT EN -BICARBONAAT ONDER DRUK (Hydrolysis of Dichlorobutanes under Pressure in the Presence of Sodium Carbonate and -Bicarbonate). 12p. 8 refs. MTWL: 402. (text in Dutch).
Order from OTS or ETC $1.85 61-32003

Trans. of Zhurnal Obshchei Khimii (USSR) 1937, v.7, p. 1315-1320.

DESCRIPTORS: *Butanes, *Chlorine compounds, Sodium compounds, Carbonates, *Hydrolysis.

Dumanskii, F. A. and Khailenko, L. V.
THE RHEOLOGICAL PROPERTIES OF GLYCERINE SOLUTIONS (Reologisheskie Svoistva Rastvorov Glitserina) tr. by G. Fulford. Aug 60, 4p. 9 refs. [DSIR NLL] M.4630.
Order from OTS or SLA $1.10 62-15704

Unedited trans. of #Kolloidnyi Zhurnal (USSR) 1960, v. 22, p. 277-281

DESCRIPTORS: *Glycerols, Water, Solutions, Fluid flow, Decomposition, Chemical bonds, Viscosity, Phase transitions.

The system glycerine-water represents a liquid of quasi-polymeric structure, the structure of which is due to hydrogen bonding; this bond is supposed to have the same structure as in elastic molecules. Replacement of water by alcohol in the glycerine solution removes the ability to form these structures, which is explained as being due to the blocking of the hydrogen bonding by the radicals CH_3 or C_2H_5. In glycerine-water systems, an important factor in the structure formation is the "age" of the system (time Θ). At very large times, the solutions can completely lose their experimentally determinable fluidity. The structure of the glycerine-water solutions can show the phenomenon of breakdown during deformation, which is connected (on the flow curve $\dot{\varepsilon} = f(\tau)$ p) with an almost instantaneous drop in the viscosity η_1. The viscosity of the broken-down structure is almost the same as the tabulated viscosity values, as shown in the case of the 98.8% solution in water. The transition of the glycerine-water system into the supercooled state does not produce a region of elastic aftereffects in the flow curves, i.e., supercooling does not affect the occurrence of elastic phenomena in the liquid, and only increases the overall viscosity of the system. The structure of glycerine-water solutions is thermally unstable, but after cooling it reproduces the previous value of the viscosity η_1 at equal values of Θ. (Author)

Dvoretskaya, R. M.
HET MECHANISME VAN DE EMULSIEVORMING (Formation of Emulsions). 7p. 5 refs. MTWL: 279. (text in Dutch).
Order from OTS or ETC $1.55 61-17994

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, no. 5, p. 311-313.
A trans. in English is available from ATS as ATS-RJ-16

DESCRIPTORS: *Colloids, Kerosine, Mineral oils, *Stability.

Eidus, Ya. T.
ONDERZOEK VAN KOOLMONOXYDE HYDRERINGS-KATALYSATOREN IN EEN GESLOTEN SYSTEEM MET GASCIRCULATIE (Investigations into Carbon Monoxide Hydrogenation Catalysts in a Closed System with Gascirculation) 17p. 11 refs. MTWL: 282. (text in Dutch).
Order from OTS or ETC $1.85 61-17982

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1944, no. 5, p. 349-357. Translations in English are available from OTS or SLA $1.10 as 61-18186 [1961] 8p. and from SLA as RT-616.

DESCRIPTORS: Carbon compounds, Monoxides, *Hydrogenation, *Catalysts, Chemical analysis.

Evstigneev, V. B., Gavrilova, V. A., and Krasnovskii, A. A.
DE UITDOVING VAN DE FLUORESCENTIE VAN CHLOROPHYLL EN DE MAGNESIUMVERBINDING VAN PHTALOCYANINE EN DE WISSELWERKING HIERVAN MET UITDOVERS (Quenching of the Fluorescence of Chlorophyll and of Magnesium Phthalocyanin in their Interaction with Quenchers) 9p. 6 refs. MTWL: 405. (text in Dutch).
Order from OTS or ETC $1.55 61-32006

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 74, no. 2, p. 315-318.
A trans. in English is available from SLA as RT-1938.

DESCRIPTORS: *Chlorophylls, *Phtalocyanines, Magnesium compounds, *Fluorescence, Photochemical reactions.

Figurovskii, N. A. and Futran, M. F.
AARD EN DIKTE VAN BESCHERMENDE EMULGATOR LAGEN AAN HET OPPERVLAK VAN EMULSIEDRUPPELS (Nature and Thickness of Protective Layers of Emulsifiers on the Surface of Emulsions Droplets). 16p. 18 refs. MTWL: 286. (text in Dutch).
Order from OTS or ETC $1.85 61-17976

Trans. of Kolloidnyi Zhurnal (USSR) 1947, v. 9, no. 5, p. 392-399.

DESCRIPTORS: *Colloids, *Drops, Surfaces, Protective coverings.

Freidlin, L. Kh. and Ziminova, N. I.
DE TRAPSGEWIJZE WATERSTOFONTTREKKING AAN NIKKEL, TWEE BINDINGSVORMEN VAN WATERSTOF IN DE KATALYSATOR (Differentiated Outgassing of Nickel. Two Forms of Binding of Hydrogen in a Catalyst) 7p. 3 refs. MTWL: 404. (text in Dutch).
Order from OTS or ETC $1.55 61-32005

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 74, no. 5, p. 955-958.
A trans. in English is available from ATS as ATS-RJ-394.

DESCRIPTORS: *Nickel catalysts, *Hydrogen, Solutions, Adsorption.

Frank-Kamenetskii, D. A.
KINETICS OF COMPLEX REACTIONS. II. HETEROGENEOUS REACTIONS. [1961] 4p. 37 refs.
Order from OTS or SLA $1.10 62-10888

Condensed trans. of Uspekhi Khimii (USSR) 1941, v. 10, no. 5, p. 544-558.

DESCRIPTORS: *Reaction kinetics, *Chemical reactions.

Frenkel, Ya. I. and Fradkina, E. M.
ELECTRISCHE PARAMETERS VAN DISPERSE SYSTEMEN (Electrical Parameters of Disperse Systems). 7p. 1 ref. MTWL: 278. (text in Dutch).
Order from OTS or ETC $1.55 61-17993

Trans. of Kolloidnyi Zhurnal (USSR) 1948, v. 10, no. 3, p. 241-244.
A trans. in English is available from SLA as RT-1545.

DESCRIPTORS: *Colloids, *Dielectric properties, Conductivity, Electrolytes, Drops, Dielectrics.

Gapon, E. N. and Gapon, T. B.
DE DYNAMICA VAN DE IONEN-UITWISSELING (Dynamics of Ion Exchange). 19p. 7 refs, MTWL: 384. (text in Dutch).
Order from OTS or ETC $1.85 61-32022

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, no. 9, p. 937-947.

DESCRIPTORS: *Ion exchange, Solids, Solutions, *Reaction kinetics, Adsorption.

Gel'fman, M. Sh.
BEREKENING VAN DE CHEMISCHE AFFINITEIT BIJ DE VORMING VAN ZWAVELZUUR-SALPETERZUUR-VERBINDINGEN (Calculation of the Chemical Affinity in the Formation of Sulfuric-Nitric Compounds) tr. by G. J. M. Fritschy. 11p. 5 refs. MTWL: 248. (text in Dutch).
Order from OTS or ETC $1.55 61-17898

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 839-845.

DESCRIPTORS: *Sulfuric acid, *Nitric acid, Sulfur compounds, Oxides, Heat of formation, Chemical reactions.

Gel'fman, M. Sh.
DE INVLOED VAN DE VERDUNNING VAN EEN MENGSEL VAN ZWAVEL- EN SALPETERZUUR OP DE REACTIEWARMTE BIJ DE INWERKING VAN DEZE ZUREN OP ELKAAR (Effect of Dilution of a Mixture of Sulfuric Acid and Nitric Acid on the Heat of Interaction of these Acids) tr. by G. J. M. Fritschy. 10p. 11 refs. MTWL: 364. (text in Dutch).
Order from OTS or ETC $1.55 61-32043

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1950, v. 23, p.. 913-919.

DESCRIPTORS: *Sulfuric acid, *Nitric acid, Water, Heat of reaction.

Gel'fman, M. Sh.
STOLPUNTEN VAN NITROOLEUMS (Freezing Temperature of Nitrobleums) tr. by G. J. M. Fritschy) 9p. 3 refs. MTWL: 249. (text in Dutch).
Order from OTS or ETC $1.55 61-17899

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 42-47.

DESCRIPTORS: *Sulfuric acid, Sulfur compounds, Oxides, *Freezing point, *Nitric acid.

Glazman, Yu. M. and Tartakovskaya, B. E.
HET VERSCHIJNSEL VAN HET GEWENNEN BIJ DE COAGULATIE VAN HYDROPHOBE COLLOIDEN MET ELECTROLYTEN (The Adoptation Phenomenon in the Coagulation of Hydrophobic Colloids by Electrolytes) 19p. 8 refs. MTWL: 320. (text in Dutch).
Order from OTS or ETC $1.85 61-17946

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, no. 5, p. 299-307.

DESCRIPTORS: *Colloids, Electrolytes, *Coagulation.

Grigorov, O. N., Lapinskaya, E. M., and Prikhid'ko, N. E.
ONDERZOEK VAN HET ELECTRODIALYSEPROCES (Investigation of the Electrodialysis) 17p. 5 refs. MTWL: 379. (text in Dutch).
Order from OTS or ETC $1.85 61-32031

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, p. 221-229.

DESCRIPTORS: *Electrodialysis, Solutions, Membranes, Gelatin, Cellulose nitrates, *Electroosmosis.

Gurevich, A. A.
DE PHOTOSENSIBILISERENDE WERKING VAN CHLOROPHYL OP HET OXYDO-REDUCTIE PRODUCT (The Photosensitizing Action of Chlorophyll on Oxidation-reduction Reactions). 8p. 13 refs. MTWL: 292. (text in Dutch).
Order from OTS or ETC $1.55 61-17966

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 59, no. 5, p. 937-940.

DESCRIPTORS: *Chlorophylls, Oxidation-reduction reactions, *Photochemical reactions.

Hilpert, Siegfried and Beyer, Johannes.
ON FERRO-FERRIC OXIDE AND FERRIC OXIDE. [1961] [15]p. (2 figs. omitted) 14 refs.
Available on loan from SLA 62-10554

Trans. of a German language article from an unidentified source, n. d.

DESCRIPTORS: *Iron compounds, *Oxides, Reduction, Hydrogen, Water vapor, Gases, Chemical reactions.

The reduction of ferric oxide by mixtures of hydrogen and water vapor yielded, up to 500°, a sharp break in the reaction velocity curve, if the composition of Fe_3O_4 was reached. For this oxide, a simple method of preparation was reported. The possibility of getting preparations rich in ferrous oxide but free from metal increases with increasing temperature, and correspondingly higher water vapor content. The product that came closest to being ferrous oxide contained 1.5% ferric oxide still. The processes during reduction can be explained on the assumption of solid solutions. The oxidation of iron by mixtures of hydrogen and water vapor also indicates that the reaction does not stop at ferrous oxide. A method was worked out for comparative magnetic measurements on powders. Results obtained with it equally well indicate the presence of solic solutions in ferro-ferric

oxide. The methods given in the literature for preparing ferrous oxide were tested out. They turned out not to be reproducible. On grounds of experimental results, several studies relating to the same field were discussed. (Author)

Trans. of [Khimicheskaya Promyshlennost'] 1937, v. 14, p. 1225-1229.

DESCRIPTORS: Ammonia, Synthesis, *Iron catalysts, Mineral oils, *Poisoning.

Ioffe, I. I. and others.
EFFECT OF MACROKINETIC FACTORS ON THE RATE OF OXIDATION OF NAPHTHALENE IN A FLUIDIZED CATALYST BED. 31 Aug 61. [12]p. 11 refs. CTRA Technical Note no. 109; [DSIR] NLL M. 4606.
Order from OTS or SLA $1.60 62-13113

Trans. of Khim[icheskaya] Prom[yshlennost'] (USSR) 1961, no. 4, p. 258-263.

DESCRIPTORS: *Naphthalenes, Oxidation-reduction reactions, Reaction kinetics, *Phthalic anhydride, Anhydrides, Production, *Fluidized solids, Catalysts, Catalysis, Transport properties.

The effect of such macrokinetic parameters as linear gas velocity, and density and thickness of the catalyst bed were investigated. The study of the kinetics of the oxidation of naphthalene to phthalic anhydride was carried out in parallel over the same catalyst in fixed and fluidized beds. It was established that when the process takes place in a fixed bed, the slope of the curves on coordinates of constant reaction rate against temperature is greater than when the process is carried out in a fluidized bed of catalyst. This indicates the greater importance of diffusion retardation in the second case. Since the size of the catalyst particles used in the experiments was extremely small, the observed retardation must be due to transport phenomena outside the particles and, in particular, to interphase diffusion. An empirical equation was derived which indicates that conversion of naphthalene to phthalic anhydride rises with increasing linear gas velocity and falls with increasing catalyst bed depth. When the dispersion of the catalyst in a fluidized bed is increased, the transition of the reaction to the diffusion region shifts towards higher temperatures

Kagan, M. Ya. and Shcheglova, N. A.
KINETIEK EN MECHANISME VAN KATALYTISCHE HYDRERINGS- EN DEHYDRERINGSREACTIES. 3. DEHYDRERING VAN CYCLOHEXAAN MET EEN PLATINA KATALYSATOR (Reactions of the Catalytic Hydro-dehydrogenation. III. Dehydrogenation of Cyclohexane on a Platinum Catalyst) 19p. 7 refs. MTWL: 289. (text in Dutch).
Order from OTS or ETC $1.85 61-17979

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1949, v. 23, no. 10, p. 1203-1214.

DESCRIPTORS: *Cyclohexanes, Platinum catalysts, *Dehydrogenation, Hydrogenation, Reaction kinetics.

Kamzolkin, V. P. and Livshits, V. D.
DE VERGIFTIGENDE WERKING VAN OLIE OP DE ACTIVITEIT VAN KATALYSATOREN VOOR DE AMMONIAKSYNTHESE (The Poisoning Action of Oil on the Activity of Catalysts for the Synthesis of Ammonia) tr. by G. J. M. Fritschy. 17p. 1 ref. MTWL: 311. (text in Dutch).
Order from OTS or ETC $1.85 61-17947

Karpacheva, S. M. and Rozen, A. M.
HET GEBRUIK VAN O^{18} ALS INDICATOR BIJ HETEROGENE KATALYSE (Utilization of O^{18} as Indicator in Heterogeneous Catalysis) 8p. 8 refs. MTWL: 256. (text in Dutch).
Order from OTS or ETC $1.55 61-17883

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 6, p. 1057-1060.

DESCRIPTORS: *Oxygen, *Isotopes, Catalysis, *Oxidation, Hydrogen, Carbon compounds, Monoxides, *Dehydration, Alcohols.

Klimova, O. M. and Zaslavskii, I. I.
ONDERZOEK VAN HET SYSTEEM SALPETERZUUR-ZWAVELZUUR-WATER LANGS VOLUMETRISCHE WEG (System Nitricacid-Sulfuric acid-Water), tr. by G. J. M. Fritschy. 17p. 10 refs. MTWL: 246. (text in Dutch).
Order from OTS or ETC $1.85 61-17896

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, p. 689-697.

DESCRIPTORS: Chemical equilibrium, *Nitric acid, *Sulfuric acid, Water, *Complex compounds.

Kolomiets, B. T.
FOTOGELEIDERS VAN BISMUTHSULFIDE (Bismuth Sulfide Photoresistors) tr. by J. H. van Santen. 11p. 4 refs. MTWL: 297. (text in Dutch).
Order from OTS or ETC $1.55 61-17971

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1949, v. 19, p. 126-131.

DESCRIPTORS: *Bismuth compounds, Sulfides, *Photoelectric materials, Electricity, Conductivity.

Kudryavtsev, B. B.
TOEPASSINGEN VAN ULTRA-ACOUSTISCHE METHODEN BIJ PHYSISCH-CHEMISCHE ONDERZOEKINGEN (Application of Ultrasonic Methods in Physico-chemical Investigations) 27p. 45 refs. MTWL: 177. (text in Dutch)
Order from OTS or ETC $2.39 61-17843

Trans. of Uspekhi Khimii (USSR) 1948, v. 17, p. 158-173.

DESCRIPTORS: Physical chemistry, *Ultrasonics, Laboratory equipment.

Kunin, T. I.
ONDERZOEKINGEN OP HET GEBIED VAN DE RONGALIETBEREIDING. II. SNELHEID EN MECHANISME DER ONTLEDING VAN RONGALIET-OPLOSSINGEN (Studies on the Production of Rongalite. II. Rate and Mechanism of the Decomposition of Rongalite Solutions) tr. by G. J. M. Fritschy. 13p. 4 refs. MTWL: 398. (text in Dutch).
Order from OTS or ETC $1.85 61-32016

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, p. 199-206.

DESCRIPTORS: *Sulfites, Decomposition, Chemical reactions, Reaction Kinetics.

Kurtepov, M. M. and Fedoseeva, A. S.
IRREVERSIBELE ELECTRODE POTENTIALEN VAN METALEN IN OPLOSSINGEN VAN FLUORWATERSTOFZUUR (Irreversible Electrode Potentials of Metals in Hydrofluoric Acid Solutions) 4p. MTWL:406, (text in Dutch).
Order from OTS or ETC $1.40 61-32007

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 75, no. 4, p. 563-564.

DESCRIPTORS: Fluorides, Hydrogen compounds, Solutions, *Electric potential, *Metals.

Kuzminskii, A. S., Degteva, T. G., and Lapteva, K. A.
ONDERZOEK VAN HET OXYDATIEMECHANISME VAN Na-BUTADIEENPOLYMEER (Mechanism of the Oxidation of Sodium-Butadiene Polymer) 28p. 9 refs. MTWL: 284. (text in Dutch).
Order from OTS or ETC $2.41 61-17984

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 4, p. 423-439.

DESCRIPTORS: Polymers, *Butadienes, *Oxidation, Reaction kinetics, Oxygen.

Lachinov, S. S.
ANALYSE VAN DE REDUCTIE VAN KATALYSATOREN VOOR DE AMMONIAKSYNTHESE (Analysis of the Process of Reduction of Catalysts for the Synthesis of Ammonia) tr. by G. J. M. Fritschy. 17p. 8 refs. MTWL: 340. (text in Dutch).
Order from OTS or ETC $1.85 61-17934

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1940, v. 14, p. 1260-1270.

DESCRIPTORS: *Ammonia, Synthesis, Preparation, Iron compounds, Reduction, Oxides, Iron catalysts.

Lachinov, S. S. and Vvedenskii, A. A.
OVER DE REDUCTIE VAN IJZERKATALYSATORS VOOR DE AMMONIAKSYNTHESE. II. OVER DE INVLOED DER OMSTANDIGHEDEN BIJ DE REDUCTIE VAN EEN KATALYSATOR VOOR DE AMMONIAKSYNTHESE OP ZIJN ACTIVITEIT (The Reduction of Iron Catalysts used in the Synthesis of Ammonia. II. Influence of the Reduction Conditions on the Activity of the Catalyst) tr. by G. J. M. Fritschy. 25p. 14 refs. MTWL: 250. (text in Dutch).
Order from OTS or ETC $1.95 61-17900

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1937, v. 10, p. 435-455.

DESCRIPTORS: *Ammonia, *Synthesis, *Iron catalysts, Preparation, Reduction, Iron components, Oxides.

Levi, S. M.
INVESTIGATION OF THE STRUCTUROMECHANICAL PROPERTIES OF GELATIN. [1961] [11]p. 11 refs.
Order from OTS or SLA $1.60 62-15432

Trans. of #Kolloidnyi Zhurnal (USSR) 1960, v. 22, no. 5, p. 599-605.

DESCRIPTORS: *Gelatins, Molecular structure, Mechanical properties, Viscosity, Elasticity, Temperature, *Gels, Shear stresses.

At temperatures above 38° to 40° C and concentrations less than 15%, gelatin solutions possess the properties of a Newtonian liquid; at a temperature below 40°, gelatin solutions possess the properties of a viscoelastic body. The appearance of structure during cooling of gelatin solutions requires a definite time, during which the solutions possess only viscosity; the duration of the time of formation of the structure depends on the temperature drop. From the moment of formation of structure, a continuous thixotropic increase in the viscosity and maximum shear stress, which is proportional to the molecular weight of the gelatin, is observed in gelatin solutions. As a result, the gelatin solution loses its fluidity and is converted to a gel. When the gelatin is converted to a gel, a substantial change occurs in the structure of the solution, consisting of an abrupt increase in the maximum shear stress and elasticity modulus. The rheological properties of gels and xerogels of gelatin are determined by the configuration of its molecules and by the intermolecular bonds. When the configuration of gelatin molecules changes, in the direction of their development when surface-active substances act on them, or in the direction of disruption of the intermolecular bonds by inert fillers, gels and xerogels of gelatin are plasticized. (Author)

Levich, V. G.
DE THEORIE VAN DE CONCENTRATIE-POLARISATIE (The Theory of the Concentration-polarization) tr. by G. J. M. Fritschy and P. J. Hoftijzer. 22p. 13 refs. MTWL: 213 (text in Dutch).
Order from OTS or ETC $1.87 61-17917

Partial trans. of Zhurnal Fizicheskoi Khimii (USSR) 1944, v. 18, p. 335-355.

DESCRIPTORS: *Electrochemistry, *Polarization, Diffusion, Boundary layer.

Levin, V. I.
STATISTISCHE THEORIE VAN ACTIEVE OPPERVLAKKEN (Statistical Theories of Active Surfaces). 46p. 41 refs. MTWL: 244. (text in Dutch).
Order from OTS or ETC $2.75 61-17894

Trans. of Uspekhi Khimii (USSR) 1948, v. 17, p. 174-203.

DESCRIPTORS: *Surface active substances, Adsorption, Catalysis, *Reaction kinetics, Theory.

Martynov, V. M.
ENKELE VRAAGSTUKKEN UIT DE EMULSIETHEORIE II. EMULSIEDICHTHEID IN VERBAND MET DE DISPERSIEGRAAD (Some Problems of the Emulsion Theory. II. Density of Emulsions as Function of the Degree of Dispersity) 10p. 6 refs. MTWL: 378. (text in Dutch).
Order from OTS or ETC $1.55 61-32030

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, no.4 p. 255-259.

DESCRIPTORS: *Colloids, Density, Theory.

Mit'kevich, G. P.
METING VAN DE "STABILITEIT VAN SCHUIM QUA SAMENHANG" (Determination of the "Body" of Foams) 6p. 4 refs. MTWL: 280. (text in Dutch).
Order from OTS or ETC $1.55 61-17995

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 8, p. 846-847.

DESCRIPTORS: *Foams, *Stability, Measurement.

Novikov, S. S., Rubinshtein, A. M. and others.
DE OORZAKEN DER LAGE STABILITEIT VAN PALLADIUM-KATALYSATOREN BIJ KATALYTISCHE DEHYDRERING (Causes of the Instability of Palladium Catalysts in Dehydrogenation Catalysis) 6p. 6 refs. MTWL: 265. (text in Dutch).
Order from OTS or ETC $1.55 61-17878

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 6, p. 1049-1051.

DESCRIPTORS: *Palladium catalysts, *Dehydrogenation, Cyclohexanes, Reaction kinetics.

Pakshver, A. B., Kokhomskaya, T. N., and Dolinin, R. I.
DE INVLOED VAN GEMENGDE OPLOSMIDDELEN OP HET OPLOSSEN VAN HOOGMOLECULAIRE STOFFEN (The Influence of Mixed Solvents on the Process of Solution of High-Molecular Substances) tr. by G. J. M. Fritschy. 11p. 7 refs. MTWL: 365. (text in Dutch).
Order from OTS or ETC $1.55 61-32044

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1950, v. 23, p. 990-997.

DESCRIPTORS: *Polymers, *Organic solvents, Mixtures, Solution, Cellulose acetates

Panich, R. M. and Voyutskii, S. S.
BEPALING VAN DE RHEOLOGISCHE EIGENSCHAPPEN VAN STRUCTUURBEZITTENDE VLOEISTOFFEN MET BEHULP VAN DE ROTATIE-VISCOMETER (Determination of Rheological Characteristics of Structured Liquids with the Aid of the Rotation-viscometer). 9p. 5 refs. MTWL: 381. (text in Dutch).
Order from OTS or ETC $1.55 61-32019

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, no. 5, p. 550-553.

DESCRIPTORS: *Liquids, *Viscosity, Viscosimeters, Glycerols, Mineral oils, Castor oil.

Peisakhov, I. L.
AFLEIDING VAN DE FROMULES VOOR DE ABSORPTIE-COEFFICIENT VAN GOED OPLOSBARE GASSEN (Deducing the Formulae for the Absorption Coefficients of Easily Soluble Gases) 15p. MTWL: 155. (text in Dutch).
Order from OTS or ETC $1.85 61-17857

Trans. of [Khimicheskaya Promyshlennost'] (USSR) 1937, v. 14, p. 361-365.

DESCRIPTORS: *Gases, Solubility, *Absorption, Theory.

Petrov, A. A.
ORDER OF ADDITION OF HYDROGEN HALIDES TO ORGANIC OXIDES IN AQUEOUS MEDIUM. [1961] 3p. 12 refs.
Order from OTS or SLA $1.10 62-10865

[Condensed] trans. of Zhurnal Obshchei Khimii (USSR) 1945, v. 15, no. 7/8, p. 690-698.

DESCRIPTORS: *Organic compounds, *Oxides, *Hydrogen compounds, *Halides, Addition reactions, Butenes, Propenes, Alcohols, Chlorides, Hypochlorous acid, Acids, Water, Ethers.

Pozin, M. E.
DE THEORIE DER CHEMISORPTIE (The Theory of Chemabsorption) tr. by G. J. M. Fritschy. 43p. 22 refs. MTWL: 303. (text in Dutch).
Order from OTS or ETC $2.71 61-17957

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1947, v. 20, p. 963-975, and 1948, v. 21, p. 58-81, 218-226.

DESCRIPTORS: *Adsorption, Gases, Towers (Chemis' try), *Kinetic theory.

Pozin, M. E.
DE THEORIE DER CHEMISORPTIE (The Theory of the Chemabsorption) tr. by G. J. M. Fritschy and J. Huiskamp. 25p. 28 refs. MTWL: 214. (text in Dutch)
Order from OTS or ETC $1.95 61-17918

Partial trans. of #Zhurnal Prikladnoi Khimii (USSR) 1947, v. 20, p. 345-359, p. 523-531, and p. 754-761.

DESCRIPTORS: *Absorption, Carbon dioxide, Chlorine Sulfur compounds, Oxides, Ammonia, Reaction kinetics.

Rado, Aurel.
SPECIAL METHODS OF PHOTOCHEMICAL RESEARCH IN HUNGARY. 25 June 61 [6]p. JPRS: 8437.
Order from OTS or SLA $1.10 62-19412

Trans. of Kep es Hangtechnika (Hungary) 1961, v. 7, no. 1, p. 6-8.

DESCRIPTORS: Scientific research, *Photochemistry, *Hungary.

Rotinyan, A. L.
OVER DE SNELHEID DER REACTIE VAN ZWAVELWATERSTOF MET ENIGE METAALOXYDEN (Velocity of the Reaction of Hydrogen Sulfide and Certain Metal Oxides) tr. by G. J. M. Fritschy. 7p. 2 refs. MTWL: 212. (text in Dutch).
Order from OTS or ETC $1.55 61-17916

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 807-809.

DESCRIPTORS: *Hydrogen compounds, Sulfides, *Metals, *Oxides, Reaction kinetics, Chemical reactions, Mercury, Lead, Manganese.

Rudakova, E. F. and Velikovskii, A. S.
CONDITIONS FOR THE FORMATION OF SULPHUROUS COMPOUNDS AND SULPHUR IN OILS. 15p. 11 refs. MTWL: 385.
Order from OTS or ETC $1.85 61-32023

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 6, p. 49-54.
Another trans. is available from SLA as RT-1385.

DESCRIPTORS: *Mineral oils, *Sulfur compounds, Sulfur, Hydrogen compounds, Sulfides, Hydrocarbons

Samsonov, G. V.
INTERMEDIATE STAGES OF REACTIONS FORMING CARBIDES OF TITANIUM, ZIRCONIUM, VANADIUM, NIOBIUM AND TANTALIUM. 29 Sep 61 [19]p. 24 refs. MCL-1425; AD-265 797.
Order from OTS or SLA $1.60 62-13167

Unedited rough draft trans. of mono. Obshchaya Neorganicheskaya i Fizicheskaya Khimiya (General, Inorganic and Physical Chemistry) [Kiev] 1956, p. 287-296.

DESCRIPTORS: Preparation, *Carbides, Titanium compounds, Zirconium compounds, Vanadium compounds, Niobium compounds, Tantalum compounds, Oxides, Chemical reactions, Heat of reaction, Carbon compounds, Monoxides, Reduction, Vacuum furnaces.
Tensimetric examination was made of the formation of the carbides TiC, ZrC VC, NbC and TaC in a vacuum. During x-ray and chemical analysis of intermediate and final products, and also during the calculation of approximate heat values of their formation, the passage of the reaction is confirmed for obtaining TiC, and ZrC through the stage of intermediate oxides Ti203, Ti305, TiO and Zr203, ZrO, respectively and also for the reaction of forming carbides of V (from V203+5C), of Nb and Ta (from Nb205+7C and Ta205+7C) through the stage of intermediate oxides VO, V40 and Ta02, Ta40. The presence of intermediate oxides of Zr, Zr203 and ZrO, and similar corresponding oxides Ti203 and TiO is indicated, and it was established that Zr0 has a cubic face-centered lattice with period a equal 4.62 Angstrom. The conditions for obtaining NbC and TaC in a vacuum were made more precise. (Author)

Sharov, V. S.
LOOPSNELHEID VAN KATIONEN IN EEN GEL-SUSPENSIE VAN KLEI BIJ ELECTROLYSE (Rate of Motion of Cations in a Clay Suspengel During Electrolysis) 8p. 3 refs. MTWL: 377. (text in Dutch).
Order from OTS or ETC $1.55 61-32029

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, p. 283-286.

DESCRIPTORS: *Ions, Motion, Clays, Colloids, *Electrolysis.

Shuikin, N. I., Minachev, Kh. M., and Rozhdestvenskaya, I. D.
HYDRERING EN DEHYDRERING VAN KOOLWATERSTOFFEN MET KATALYSATOREN MET EEN LAAG NIKKELGEHALTE (Hydrogenation and Dehydrogenation of Hydrocarbons with Low Percent Nickel Catalysts). 7p. 5 refs. MTWL: 407. (text in Dutch).
Order from OTS or ETC $1.55 61-32008

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 72, no. 5, p. 911-913.

DESCRIPTORS: Hydrocarbons, *Hydrogenation, *Dehydrogenation, Nickel catalysts, *Benzenes, *Cyclohexanes.

Smirnov, N. I. and Polyuta, S. E.
HET OPSTIJGEN VAN GASBELLEN IN EEN VLOEIBAAR MILIEU (The Rising of Gasbubbles in a Liquid Milieu) tr. by G. J. M. Fritschy. 7p. 2 refs. MTWL: 310. (text in Dutch).
Order from OTS or ETC $1.55 61-17964

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, p. 1208-1210.

DESCRIPTORS; Liquids, *Gases, *Bubbles, Aerodynamics.

Starodubtsev, S. V.
TOEPASSING VAN GEMODULEERDE BUNDELS MOLECULEN BIJ HET ONDERZOEK VAN ADSORPTIEVERSCHIJNSELEN (Investigation of Adsorption Phenomena by the Method of Modulated Molecular Beams) tr. by G. J. M. Fritschy. 14p. 7 refs. MTWL; 367. (text in Dutch).
Order from OTS or ETC $1.85 61-32046

Trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1949, v. 19, p. 215-224.
A trans. in English is available from LC or SLA mi$2.40, ph$3.30 as AEC-tr-3880, 60-15044, Oct 59, 20p.

DESCRIPTORS: *Molecular beams, Adsorption, *Metals, High temperature research.

Taubman, A. B.
ADSORPTIE UIT WATERIGE OPLOSSINGEN VAN MENGSELS OPPERVLAKTE-ACTIEVE STOFFEN (Adsorption from Aqueous Solutions of Surface Active Substances) 8p. 9 refs. MTWL: 408. (text in Dutch).
Order from OTS or ETC $1.55 61-32009

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 74, no. 3, p. 521-524.
A trans. in English is available from LC or SLA mi$1.80, ph$1.80 as 61-13691, Mar 54, 6p.

DESCRIPTORS: Detergents, Solutions, *Adsorption, *Phase studies.

Terent'ev, A. P., Klabunovskii, E. I., and Patrikeev, V. V.
ASYMMETRISCHE SYNTHESE MET BEHULP VAN KATALYSATOREN, NEERGESLAGEN OP LINKS- EN RECHTSDRAAIEND KWARTS (Asymmetrical Synthesis with Catalysts, Deposited on Right and Left Quartz) 8p. 6 refs. MTWL: 400. (text in Dutch).
Order from OTS or ETC $1.55 61-32018

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 74, no. 5, p. 947-950.

DESCRIPTORS: Magneto-optic rotation, *Asymmetric bodies, Quartz crystals, Catalysts, *Synthesis.

Ternovskaya, A. N. and Belopol'skii, A. P.
THE ABSORPTION OF GASES IN THE PRESENCE OF SURFACE-ACTIVE MATERIALS. I. THE EFFECT OF SURFACE-ACTIVE MATERIALS ON THE RATE OF ABSORPTION OF SULPHUR DIOXIDE IN WATER (Absorbtsiya Gazov v Prisutstvii Poverkhnostno-Aktivnykh Veshchestu. I. Vliyanie Poverkhnostno-Aktivnykh Veshchestv na Skorost' Absorbstii Sernistogo Gaza Vadoi) tr. by G. Fulford. Aug 60 [18]p. 30 refs. [DSIR NLL] M. 4297.
Order from OTS or SLA $1.60 62-13143

Unedited trans. of Zhurnal Fizicheskoi Khimii (USSR) 1950, v. 24, p. 43-57.

DESCRIPTORS: *Sulfur compounds, *Dioxides, *Gases, Absorption, Water, Absorbents, Wetting agents, Monomolecular films, Adsorption, Chemical reactions, Surface tension, Liquids.
The effect of soluble surface-active materials (merzolyat, sul'fanol, and nekal') on the rate of absorption of sulphur dioxide in water was investigated. It was shown that the presence of a surface-active material leads to a considerable reduction in the rate of absorption. Under the experimental conditions, the maximum reduction in the absorption rate, compared with that for pure water, was 26.5% in the case of merzolyat and sul'fanol, and 38.5% in the case of nekal'. The change in the rate of absorption ceases at very small concentrations of merzolyat, sul'fanol and nekal' (of the order of a thousandth of a percent), long before reaching the inactive part of the surface-tension isotherm of the absorbent. From the experimental data, it was concluded that the reason for the change in the absorption rate in the presence surface-active materials cannot be due to the change in surface tension. The reason for the change in the rate of absorption could be due to the formation of an adsorbed layer of molecules of the surface-active material at the surface of the liquid. (Author)

Ternovskaya, A. N. and Belopol'skii, A. P.
[THE ABSORPTION OF GASES] IN THE PRESENCE OF SURFACE-ACTIVE MATERIALS. II. ON THE ROLE OF ADSORBED FILM OF SURFACE-ACTIVE MATERIALS IN THE ABSORPTION PROCESS 'Absorbtsiya Gazov v Prisutstvii Poverkhnostno-Aktivnykh Veshchestv. II. O Roli Adsorbtsionnoi Plenki Poverkhnostno-Aktivnogo Veshchestva v Absorbtsionnom Protsesse) tr. by G. Fulford. Sep 60, 4p. 10 refs. [DSIR NLL] M. 4287.
Order from OTS or SLA $1.10 62-13134

Unedited trans. of Zhurnal Fizicheskoi Khimii (USSR) 1950, v. 24, p. 981-987.

DESCRIPTORS: *Sulfur compounds, *Dioxides, *Gases, *Absorption, Water, Absorbents, Wetting agents, Monomolecular films, *Adsorption, Chemical reactions, Surface tension, Liquids.
It was shown that the limiting reduction in the rate of absorption of sulphur dioxide gas by water in the presence of surface-active materials (sul'fanol, mer merzolyat, and nekal') is attained at concentrations sufficient for the formation of saturated monomolecular adsorbed layers. The presence of the latter changes the hydrodynamics of the flowing liquid film to conditions unfavourable for adsorption. The calculations of the adsorption isotherms for the materials mentioned above gave a maximum at concentrations of the surface-active materials which agree closely with the concentrations at which the rate of absorption ceased to change. The presence of a minimum in the curves for the absorption of sulphur dioxide gas in the presence of nekal' at a concentration of 0.05% is explained by the orientation phenomena of the adsorbed molecules, which leads to a maximum "rigidity" of the monolayer. The smaller value of the limiting value of the reduction effect (at nekal' concentrations of about 0.1%) is connected with a change in the orientation of the adsorbed molecules. (Author) (See also 62-13143)

Usachev, P. V.
HET MECHANISME VAN DE KATALYTISCHE AMMONIAKSYNTHESE (The Mechanism of the Catalytic Synthesis of Ammonia) tr. by G. J. M. Fritschy. 8p. 10 refs. MTWL: 308. (text in Dutch).
Order from OTS or ETC $1.55 61-17962

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1940, v. 14, p. 1246-1249.

DESCRIPTORS: *Ammonia, *Synthesis, Catalysis, Theory.

Voinov, B. P.
NEW EQUATION FOR THE RELATIONSHIP BETWEEN THE MOLECULAR WEIGHT OF PETROLEUM HYDROCARBONS AND PETROLEUM FRACTIONS AND THEIR SPECIFIC GRAVITY AND BOILING POINT. 6p. 6 refs. MTWL: 147.
Order from OTS or ETC $1.55 61-17869

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, [v. 26] no. 5, p. 52-53.

DESCRIPTORS: Petroleum, *Hydrocarbons, *Molecular weight, Fractionation, *Boiling, Temperature, *Gravity, Statistical functions.

Vol'kenshtein, F. F.
ENKELE TREKKEN VAN DE ADSORPTIE WELKE VEROORZAAKT WORDEN DOOR THERMISCHE STORINGEN IN HET KRISTALOPPERVLAK (Some Peculiarities of Adsorption due to "Thermal Disorder" on Crystal Surfaces) tr. by S. Kruyer. 21p. 4 refs. MTWL: 307. (text in Dutch).
Order from OTS or ETC $1.87 61-17961

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1949, v. 23, p. 917-930.
A trans. in English is available from NRCC as NRCC TT 126.

DESCRIPTORS: *Crystals, Surfaces, Deformation, Heat, *Adsorption, Gases.

Volkenshtein, F. F.
OVER HET PROBLEEM VAN DE WISSELWERKING VAN GEADSORBEERDE MOLECULEN IN VERBAND MET DE THEORIE OVER DE ADSORPTIE AAN HETEROGENE OPPERVLAKKEN (The Problem of the Interaction of Adsorbed Molecules and the Theory of Adsorption on Inhomogeneous Surfaces) 25p. 5 refs. MTWL: 410. (text in Dutch).
Order from OTS or ETC $1.95 61-17997

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1947, v. 21, no. 2, p. 163-178.
A trans. in English is available from NRCC as NRCC TT 120.

DESCRIPTORS: *Surfaces, *Adsorption, Molecules, Theory.

Yanovskii, M. I.
THEORIE VAN CHROMATOGRAPHIE AAN HETEROGENE OPPERVLAKKEN (Theory of Chromatography on Nonhomogeneous Surfaces). 6p. 1 ref. MTWL: 325. (text in Dutch).
Order from OTS or ETC $1.55 61-17939

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 69, no. 5, p. 655-657.

DESCRIPTORS: *Chromatographic analysis, Surfaces, Theory.

Zagvozdkin, K. I., Rabinovich, Yu. M., and Barilko, N. A.
STUDY OF THE EQUILIBRIUM OF THE SYSTEM P_2O_5 - WATER. 17p. 17 refs. MTWL: 168.
Order from OTS or ETC $1.85 61-17854

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1940, v. 13, no. 1, p. 29-36.

DESCRIPTORS: Phosphorous compounds, Oxides, *Phosphoric acids, Water, *Chemical equilibrium.

EARTH SCIENCES

P., M.
YUGOSLAV HYDROMETEOROLOGICAL SERVICE. 29 Aug 61 [22]p. JPRS: 8799.
Order from OTS or SLA $2.60 62-19699

Trans. of Jugoslovenski Pregled (Yugoslavia) 1961 [v. 5] Apr, p. 177-179.

DESCRIPTORS: *Hydrology, *Meteorology, *Yugoslavia.

Rautian, T. G.
THE ENERGY OF EARTHQUAKES. 24 Jan 62 [15]p. AID rept. 62-12; AD-271 513.
Order from OTS or SLA $1.60 62-19113

Summary trans. of Akademiya Nauk SSSR. Institut Fiziki Zemli. Trudy, 1960, no. 9(176) p. 75-114.

DESCRIPTORS: *Earthquakes, Classification, *Seismic waves, Attenuation, Nomographs, Energy.

The attempt is made to classify earthquakes according to the amount of energy flowing through a sphere of a given radius-- the "reference sphere"--and to establish a relationship between the total seismic energy (E_0) released by an earthquake and the flow of energy E through the reference sphere. The following methodological problems are discussed: determination of the energy density at the observation points, attenuation of the density of energy with distance, design of rated nomographic charts, and accuracy of the energy determination. Energy values obtained by the new method are compared with those derived by Golitsyn and Gutenberg-Richter. Finally, the shape of the isoenergetic lines is analyzed according to the attenuating energy of the seismic waves propagating along and across the strike of main geological structures. (Author)

Climatology and Meteorology

Desi, Frigyes.
ON THE CORRECTION OF THE VIRTUAL TEMPERATURE. 8 Dec 61 [7]p. JPRS: 11425.
Order from OTS or SLA $1.10 62-19678

Trans. of Idojaras (Hungary) 1961 [v. 65] no. 1, p. 31-34.

DESCRIPTORS: Air, Density, Humidity, *Temperature, Corrections, Condensation, Precipitation.

An equation for virtual temperature

$$T_v = T \frac{1 + 1.604\,m}{1 + m}$$

is derived. The density of dry air of T_v temperature, at identical pressures, equals that of the humid air characterized by T temperature and m mixture relationship. The equation is transformed so that, instead of m mixture, s specific humidity is used. It be-

$$T_v = T\,(1 + 0.604\,s).$$

Gal'tsov, A. P.
CONFERENCE ON PROBLEMS OF CLIMATE CONTROL. 21 Dec 61, 3p. AID rept. 61-170; AD-269 790.
Order from OTS or SLA $1.10 62-15410

Abstract trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya, 1961, no. 5, p. 128-133.

DESCRIPTORS: Conferences, *Climate, Control, Meteorology.

The conference was held on April 25-28, 1961 in Leningrad. A summary is presented of papers presented by Ye. K. Fedorov, L. A. Vitel's, M. I. Budyko, M. Ye. Berlyand, and M. Ye. Shvets.

Szalay-Papai, Gabriella.
AIR CURRENTS IN HUNGARY WITH LARGE-SCALE WEATHER SITUATIONS OF N- AND S-STEERING. 14 Feb 62 [11]p. JPRS: 12514.
Order from OTS or SLA $1.60 62-19149

Trans. of Idojaras (Hungary) 1961, v. 65, no. 2, p. 93-98.

Portions of this report will not reproduce well.

DESCRIPTORS: *Wind, Velocity, Mountains, Terrain, Meteorological data, Weather stations, Hungary.

All the large-scale mCc weather situations were collected covering the five years between 1951 and 1955. The total number came to almost one hundred. All the pilot data were recorded at the following observation stations: Gyor, Szombathely, Budapest, Miskolc, Debrecen, Szeged, Pecs and Nagykanizsa. (The last station started its operation only in 1953.) Figures for the ground, and 500, 1,000, 1,500, 2,000, 2,500 and 3,000-meter levels were recorded. The data of stations with at least 30 observations at 4,000 and 5,000-meter levels were also taken into consideration. The winter and summer periods were studied separately. Winds were grouped in accordance with the four main and four complementary directions. By using the Lambert-formula, the resultant wind vectors and their velocities were also computed. (Author)

Geodesy

CONGRESS OF DELEGATES OF THE SOCIETY OF POLISH GEODESISTS (NO. 14). 20 June 61 [11]p. JPRS: 8473.
Order from OTS or SLA $1.60 62-19318

Trans. of Przeglad Geodezyjny (Poland) 1960, v. 32, no. 7, p. 258-261.

DESCRIPTORS: Conferences, *Geodesics, *Poland.

PHOTOGRAMMETRIC, GEODETIC AND CARTOGRAPHIC SERVICES IN POLAND. 20 June 61 [11]p. JPRS: 8463.
Order from OTS or SLA $1.60 62-19319

Trans. of Przeglad Geodezyjny (Poland) 1960, v. 32, no. 12, p. 447-448 and 458-459.

DESCRIPTORS: *Aerial photography, *Mapping, *Geodesics, Photography, *Poland.

Contents:
The foundation of the photogrammetric service after 1945, by Stanislaw Dmochowski
The fifteenth anniversary of the Central Office of Geodesy and Cartography and the tenth anniversary of the State Enterprise of Photogrammetry, by Jan Chmielecki.

PHOTOGRAMMETRY, SURVEY ENGINEER TRAINING AND GEODETIC AND MAPPING PERSONALITIES IN HUNGARY. 25 July 61 [24]p. JPRS: 8623.
Order from OTS or SLA $2.60 62-19479

Trans. of Geodezia es Kartografia (Hungary) 1961, v. 13, no. 1, p. 25-34 and 55-56.

DESCRIPTORS: *Aerial photography, Photography, *Mapping, *Geodesics, *Engineering personnel, Personnel, Training, *Hungary.

Contents:
Some problems of photogrammetry in Hungary, by Gyula Hegyi
Debate on the training of survey engineers, by L. H.
Biographic information on personalities in the field of geodesy and cartography.

TOPOGRAPHIC MAPPING TECHNIQUES IN CZECHOSLOVAKIA. 13 Oct 61 [25]p. 16 refs. JPRS: 10526.
Order from OTS or SLA $2.60 62-19527

Trans. of Sbornik Vyzkumnych Praci (Czechoslovakia) 1960, v. 5, p. 108-110 and 117-131.

DESCRIPTORS: *Geodesics, *Mapping, Maps, Preparation, Errors, *Czechoslovakia.

Contents:
Principles for the derivation of criteria for mapping and the initial errors in topographic mapping using the scales 1:5,000 and 1:10,000, by Karel Kucera
Contribution to the generalization of topography on large-scale maps, by Jaroslav Kovarik.

Bem, Stanislaw.
POLAND: MAKING LARGE-SCALE MAPS. 30 June 61 [42]p. JPRS: 9531.
Order from OTS or SLA $4.60 62-19334

Trans. of mono. Rysunek Map, Warsaw, 1960, p. 154-164, 170-171, 181-183, 185-189, 196-201, 204-209.

DESCRIPTORS: *Maps, Preparation, *Poland.

Kozhevnikov, N. P.
ANALYSIS OF PHOTOGRAMMETRIC METHODS OF BRIDGING FOR HORIZONTAL AEROPHOTOGRAPHIC CONTROL. [1961] [68]p. 1 ref. ACIC LD-41.
Order from OTS or SLA $6.60 62-15602

Trans. of Tsentral'nyi Nauchno-Issledovatel'skii Institut Geodezii, Aeros"emki i Kartografii. Trudy (USSR) 1957, v. 122, p. 33-70.

DESCRIPTORS: *Aerial photography, Photography, *Mapping, Errors, Control, Stability (Lateral), Stability (Longitudinal), *Geodesics

An analysis is made of the accuracy, features, and most advantageous methods of constructing horizontal control nets by means of horizontal phototriangulation (graphical), photopolygonometry and phototriangulation, using the multiplex (Author)

Monin, I. F.
DETERMINING THE SHAPE OF THE REGULARIZED GEOID. 23 Jan 62 [11]p. 7 refs. FTD-TT-61-289; AD-270 778.
Order from OTS or SLA $1.60 62-15820

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Geodeziya i Aerofotos"emka (USSR) 1960, no. 5, p. 73-78.

DESCRIPTORS: *Earth, *Configuration, Gravity, *Geodesics, Surface properties, Geodetic data, Transformations (Mathematics), Harmonic analysis, Functions.

The most general solution of Stokes' problem (known from the theory of the Earth's shape) of determining the shape of the regularized geoid is given.

Nikiforov, D. I.
PHOTOGRAMMETRIC SURVEY OF SHORELINE FROM A SHIP. [1961] 8p.
Order from OTS or SLA $1.10 62-13085

Trans. of mono. Photogrammetry in Marine Investigation of Hydro-technical Projects, Leningrad, 1957, chap. 6, p. 85-93.

DESCRIPTORS: Shipborne Geophysical prospecting, Aerial photography, *Mapping, *Photography, Stereoscopes, Cameras, Stereoscopic map plotters, Geodesics.

Nowosielski, Emil.
SOIL-IMPROVEMENT MAPS WITH A SCALE OF 1:25,000. 20 June 61 [8]p. JPRS: 8472.
Order from OTS or SLA $1.10 62-19291

Trans. of Przeglad Geodezyjny (Poland) 1960, v. 32, no. 7, p. 242-244.

DESCRIPTORS: Geophysical prospecting, *Mapping, Geodesics, *Soils, Classification, Maps, *Poland.

Romanov, L. A.
OPTICAL ALTIMETER WITH RECTILINEAR ELEVATION GRADUATIONS. [1961] [8]p. 2 refs. ACIC LD-32.
Order from OTS or SLA $8.10 62-15582

Trans. of Tsentral'nyi Nauchno-Issledovatel'skii Institut Geodezii, Aeros"emki i Kartografii. Trudy (USSR) 1957, v. 120, 47p.

DESCRIPTORS: *Geodesics, Instrumentation, *Optical equipment, *Leveling rods, Construction, Operation

A leveling instrument is described that consists of a telescope and an additional device that brings into the telescope's field of vision images of the so-called elevation graduations which, depending upon the changes in the inclination angle of the telescope, alter their position in the field of vision relative to the stable cross hair grid.

Rusinov, M. M.
ON ORTHOSCOPY OF NON-CENTERED AEROPHOTOGRAPHIC LENSES. [1961] [51]p. 3 refs. ACIC LD-40.
Order from OTS or SLA $5.60 62-15544

Trans. of Tsentral'nyi Nauchno-Issledovatel'skii Institut Geodezii, Aeros"emki i Kartografii. Trudy (USSR) 1957, v. 122, p. 3-32.

DESCRIPTORS: *Aerial photography, Photography, *Photographic lenses, Lenses, Distortion, Errors, Corrections, Optics, Optical images, Aerial photographs.

The different distortion forms are discussed which arise from a decentered optical system, as well as their effect on the photogrammetric quality of the aerophotograph, and the methods of determining the amounts of distortion due to decentration. The discussion includes the orthoscopy of lenses set up for a finite distance, the causes of the appearance of a noncentered distortion, and methods of determining allowances for centering errors in lenses used for aerial surveying.

Urmaev, N. A.
DISTRIBUTION OF WEIGHTED ANGLES IN BASE LINE NETWORKS. [1961] [23]p. ACIC RR 5.
Order from OTS or SLA $2.60 62-15594

Trans. of Tsentral'nyi Nauchno-[Issledovatel'skii] Institut Geodezii [Aeros"emki] i Kartografii. Trudy (USSR) 1931, v. 1, p. 25-41.

DESCRIPTORS: *Geodesics, Geodetic data, Numerical analysis, Statistical distributions, Statistical functions, Transformations (Mathematics), Equations, Trigonometry.

Urmaev, N. A.
ON THE STATION ADJUSTMENT OF ANGLES MEASURED IN ALL COMBINATIONS. [1961] [7]p. 2 refs. ACIC RR 4.
Order from OTS or SLA $1.10 62-15593

Trans. of Tsentral'nyi Nauchno-[Issledovatel'skii] Institut Geodezii [Aeros"emki] i Kartografii. Trudy (USSR) 1931, v. 1, p. 20-24.

DESCRIPTORS: *Geodesics, Geodetic data, Corrections.

Avdusin, P. P. and Tsvetkova, M. A.
DE ROL VAN DE RESERVOIRSTRUCTUUR BIJ DE OPLOSSING VAN VRAAGSTUKKEN, VERBAND HOUDEND MET DE RATIONELE EXPLOITATIE VAN OLIE LAGEN (Part of the Reservoirs Structure at the Solvation of Problems, in Connection with the Rational Expoitation of Oil Layers) 9p. 6 refs. MTWL: 322. (text in Dutch).
Order from OTS or ETC $1.55 61-17936

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 69, no. 5, p. 663-666.

DESCRIPTORS: *Mineral oils, Production, *Rock, Structures.

Baturin, V. P.
OIL GENESIS. 39p. 43 refs. MTWL: 319.
Order from OTS or ETC $2.61 61-17945

Trans. of Trudy Moskovskogo Geologo-Gidro Geodezicheskogo Tresta (USSR) 1945, v. 20, no. 1-2, p. 33-58.

DESCRIPTORS: *Mineral oils, *Production, Organic materials, Literature.

Dobryanskii, A. F., Bogomolov, A. I., and Shklyar, I. V.
CATALYTIC EFFECT OF THE ROCKS ON THE CHANGE IN THE COMPOSITION OF THE OIL. 14p. MTWL: 266.
Order from OTS or ETC $1.85 61-17879

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 10, p. 1124-1132.
A trans. in English is available from ATS $15.95 as ATS-25L34R [1959] 11p.

DESCRIPTORS: *Mineral oil, Rock, Catalysis, Chemical equilibrium, *Hydrocarbons, Aluminium compounds, Silicates.

Fedorov, V. S.
CRITICAL WEIGHT ON ROCK BITS. 12p. 6 refs. MTWL: 395.
Order from OTS or ETC $1.85 61-32014

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 8, p. 16-20.

DESCRIPTORS: Rock, *Drilling machines, Resistance, Penetration, Boreholes.

Fedorov, V. S. and Zenkov, F. D.
USE OF ROCK ROLLER BITS OF VARIOUS TYPES. 19p. MTWL: 271.
Order from OTS or ETC $1.85 61-17986

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 1, p. 9-17.

DESCRIPTORS: *Rock, *Drills, Cutting tools, Teeth.

Fioletova, A. F.
LUMINESCENTIE ANALYSE VAN BITUMINA (Luminescence Analysis of Bituminous Materials) 7p. 5 refs. MTWL: 383. (text in Dutch).
Order from OTS or ETC $1.55 61-32021

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya, 1949, v. 13, no. 2, p. 254-256.
A trans. in English is available from ATS $8.75 as ATS-11M42R [1960] 4p.

DESCRIPTORS: *Bitumens, *Luminescence, Analysis, Rock, Minerals.

Furman, I. Ya. and Kagan, A. S.
OVER HET PROBLEEM VAN DE RADIOACTIVITEIT VAN AARDOLIE- EN GASHOUDENDE GESTEENTEN EN VAN DE INDUSTRIELE BETEKENIS VAN DEZE FACTOR (The Radioactivity of Petroleum and Gas-bearing Minerals. The Importance of this Factor in Commercial Geological Prospecting) 21p. 16 refs. MTWL: 257. (text in Dutch).
Order from OTS or ETC $1.85 61-17885

Trans. of Azerbaidzhanskoe Neftyanoe Khozyaistvo (USSR) 1935, [v. 15] no. 1, p. 28-35.

DESCRIPTORS: *Mineral oils, Gases, Rock, *Radioactivity, *Geophysical prospecting.

Golyakov, P. A.
INFLUENCE OF THE DIAMETER OF THE WELLS ON THE RATE OF PENETRATION. 10p. MTWL: 394.
Order from OTS or ETC $1.55 61-32013

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 10, p. 24-28.

DESCRIPTORS: Boreholes, *Drilling machines, Resistance, Penetration.

Gorak, S. V.
OSTRACODS OF CERTAIN HORIZONS OF THE MIDDLE AND UPPER CARBONIFEROUS OF THE DONETS BASIN AND CONDITIONS OF THEIR OCCURRENCE. [1961] 146p. (6 plates omitted) 51 refs.
Order from OTS or SLA $11.00 62-15287

Trans. of unidentified mono., Kiev, 1958.

DESCRIPTORS: *Crustacea, Ecology, *Paleoecology, Deposits, Sources, Geology, Rock, Calcite.

Huang, Chao-t'ao.
HYDROGEOLOGICAL CONDITIONS OF THE KARAMAI AND WU-ERH-HO AREA. 30 Nov 61 [25]p. (7 photos. omitted) 4 refs. JPRS: 11362.
Order from OTS or SLA $2.60 62-13670

Trans. of Shui Wen Ti Chih Kung Ch'en[g] Ti Chih (Chinese People's Republic) 1959, no. 6, p. 25-33.

Portions of this report will not reproduce well.

DESCRIPTORS: China, *Climate, *Deserts, Geography, *Mountains, *Water supplies, Petroleum industry, Hydrology, Geology.

Itkina, E. S.
COPPER IN THE CARBONIFEROUS SEDIMENTARY ROCKS IN THE OIL REGIONS OF THE URAL VOLGA. 8p. 2 refs. MTWL: 240.
Order from OTS or ETC $1.55 61-17914

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 62, no. 3, p. 357-360.

DESCRIPTORS: *Rock, Sedimentation, Coal, Geochemistry, *Copper, Bitumens.

Kaveev, M. S.
OIL PROSPECTING BY HYDROCHEMICAL METHODS. 7p. MTWL: 270.
Order from OTS or ETC $1.55 61-17985

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 61, no. 2, p. 329-331.
Another trans. is available from ATS as ATS-25E2R.

DESCRIPTORS: *Mineral oils, *Hydrographis surveying, Hydrology, Chemical analysis.

Khokhlov, I. V. and others.
MINING OF PERCHORA COAL DEPOSITS: SELECTED PARTS. 15 Jan 62 [43]p. JPRS: 12068.
Order from OTS or SLA $4.60 62-15673

Trans. from mono. Razrabotka Ugol'nykh Mestorozhdenii Pecherskogo Basseina, Moscow, 1960.

DESCRIPTORS: *Mining engineering, *Coal, Deposits, Production, Geology.

Kotyakov, F. I.
CHLORIDE CONTENT OF OIL LAYERS. 9p. 4 refs. MTWL: 170.
Order from OTS or ETC $1.55 61-17856

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, no. 10, p. 16-18.

DESCRIPTORS: *Mineral oils, Boreholes, Water, *Chlorides.

Krems, A. Ya.
NOTES ON THE GENESIS OF OIL AND THE CONDITIONS OF FORMATION OF OIL ACCUMULATIONS(+). 24p. 14 refs. MTWL: 160.
Order from OTS or ETC $1.93 61-17862

Trans. of Neftyanoe Khozyaistvo, (USSR) 1947, [v. 25] no. 1, p. 33-42.

DESCRIPTORS: *Mineral oils, Sources, Theory.

Kuliev, S. M.
GRAVEL SCREENS. 13p. 7 refs. MTWL: 162.
Order from OTS or ETC $1.85 61-17848

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, [v. 26] no. 2, p. 24.

DESCRIPTORS: Mineral oil, Production, *Boreholes, *Fluid flow, Sand, Porous materials, Theory, Oil filter.

Lashchenov, V. D.
CORRELATION OF THE PRODUCING HORIZONS OF THE OIL DEPOSITS OF THE ILSKO-KHOLM REGION ACCORDING TO THE PROPERTIES OF THE OIL. 7p. MTWL: 233.
Order from OTS or ETC $1.55 61-17907

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 3, p. 46-48.

DESCRIPTORS: *Mineral oils, Chemical analysis, Deposits, *Density.

Ozerov, I. M.
ALLUVIAL PROSPECTING AND THE ANALYSIS OF HEAVY CONCENTRATES, CHAPS. 4 AND 6-9: SELECTED PARTS. [1961] [91]p.
Order from OTS or SLA $8.60 62-15375

Trans. of selected parts from an unidentified mono., n.p., n.d.

DESCRIPTORS: *Geology, Geophysical prospecting, Deltas, *Minerals, *Ores, Geochemistry, Physical properties, Chemical properties, Deposits.

Contents:
Alluvial prospecting
Means and methods of panning for heavy concentrates
The treatment of heavy concentrates
The analysis of heavy concentrates
Physico-chemical properties of minerals from heavy concentrates.

Polenova, E. N.
DEVONIAN OSTRACODS OF THE KUZNETS BASIN AND MINUSINSK DEPRESSION. [1961] 256p. (13 plates 15 tables omitted) 13 refs.
Order from OTS or SLA $16.50 62-13291

Trans. from V[sesoyuznyi Neftyanoi] N[auchno]-I[ssledovatel'skii] G[eologo]-R[azvedochnyi] I[nstitut]. Trudy (USSR) 1960, no. 152.

DESCRIPTORS: *Crustacea, Deposits, *Geology, Paleoecology

Ruhle, E.
INSTITUTES OF GEOLOGICAL SCIENCES IN THE USSR. 3 Apr 61 [14]p. JPRS: 4504.
Order from OTS or SLA $1.60 62-19308

Trans. of Przeglad Geologiczny (Poland) 1958, v. 6, no. 11, p. 469-474.

DESCRIPTORS: *Geology

Sergeev, E. A.
METHODS OF MERCUROMETRIC INVESTIGATIONS (Metodika Rtutometricheskikh Issledovanii) tr. by Ivan Mittin. 1960 [25]p. (7 figs. omitted) 2 refs.
Order from OTS or SLA $2.60 62-13106

Trans. of Geokhimicheskie Poiski Rudnykh Mestorozhdenii v SSSR (Geochemical Prospecting for Ore Deposits in the USSR) Moscow, 1957, p. 158-165.

DESCRIPTORS: *Mercury, Deposits, *Geophysical prospecting, *Geology, *Geochemistry, Ores.

The possibility is considered of successful prospecting for deposits of mercury by its aureoles of dispersion.

Shatsov, N. I.
DETERMINATION OF THE POWER REQUIRED FOR DRILLING. 28p. MTWL: 392.
Order from OTS or ETC $2.41 61-32011

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 2, p. 6-15.

DESCRIPTORS: *Drilling machines, *Power, Determination, Measurements.

Shchelkachev, V. N., Govorova, G. L., and Ryabinina, Z. K.
LAWS GOVERNING THE CHANGE IN THE RADIUS OF INFLUENCE OF THE WELL IN COMPRESSIBLE FORMATIONS. 26p. 4 refs. MTWL: 300.
Order from OTS or ETC $2.37 61-17974

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 7, p. 18-28.

DESCRIPTORS: *Mineral oils, Boreholes, Fluid flow, *Production.

Shreiner, L. A.
RELATION BETWEEN THE WEAR OF A CUTTING TOOL AND THE HARDNESS OF THE ROCKS. 11p. MTWL: 149.
Order from OTS or ETC $1.55 61-17871

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, [v. 26] no. 12, p. 5.

DESCRIPTORS: *Cutting tools, Drills, Rock, Hardness

Shishchenko, R. I.
TERUGWINNING VAN BARIET UIT VERZWAARDE DIKSPOELING (Recovery of Barite from Clay Solutions) 16p. MTWL: 154. (text in Dutch).
Order from OTS or ETC $1.85 61-17865

Trans. of Azerbaidzhanskoe Neftyanoe Khozyaistvo (USSR) 1936, [v. 16] no. 5, p. 17-22.

DESCRIPTORS: *Barium compounds, *Sulfates, *Clays, Solutions, Drilling machines, Mineral oils, *Centrifuge separation.

Tochilov, V. I.
BOORPUTTEN ZONDER ZEEFPIJP (Drilling Pools without Screen Pipe) 6p. 6 refs. MTWL: 158. (text in Dutch).
Order from OTS or ETC $1.55 61-17860

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 7, p. 34-35.

DESCRIPTORS: *Boreholes, Mineral oils, Production, Wire screens, Pipes.

Yamaguchi, Tomoyuki.
THE PRESENT STATUS OF CHINA'S IRON ORE DEPOSITS. 24 Apr 61 [49]p. 3 refs. JPRS: 4554.
Order from OTS or SLA $4.60 62-19220

Trans. of mono. (report) by Daiichi Tsusho K. K. (Daiichi Trading Co.) Jan 60, 32p.

DESCRIPTORS: *Iron, *Ores, Deposits, Geology, *China.

Zakharov, A. A.
USE OF THE ECHOMETER FOR THE DETERMINATION OF VARIOUS PARAMETERS WHEN INSPECTING WELLS. 13p. MTWL: 269.
Order from OTS or ETC $1.85 61-17882

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 6, p. 31-35.

DESCRIPTORS: *Bore holes, *Echo ranging, Liquid level gages.

Mineralogy

Finn, W. K.
THE PREPARATION OF IRON ORES WITH PARTICULAR REGARD TO THE MINERALOGICAL AND PETROGRAPHIC STRUCTURE. Feb 62.
Order from BISI £5 5s BISI-1977

Trans. of [la] Met[allurgia] Ital[iana] 1959, v. 51, Sep, p. 407-417

DESCRIPTORS: *Iron, *Ores

Pinsker, Z. G., Lapidus, E. L., and Tatarinova, L. I.
ELECTRONENDIFFRACTIE-ONDERZOEK VAN DE KAOLINIETSTRUCTUUR (Electronographic Study of the Structure of Kaolinite) 16p. 4 refs. MTWL: 288. (text in Dutch).
Order from OTS or ETC $1.85 61-17978

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1948, v. 22, no. 9, p. 1017-1026.

DESCRIPTORS: Clays, *Silicates, Crystal structure, *Electron diffraction analysis.

Oceanography

Fonarev, G. A.
SOME DATA ON TELLURIC CURRENTS IN THE BARENTS SEA. 31 Jan 62 [15]p. 8 refs. JPRS: 12225.
Order from OTS or SLA $1.60 62-15472

Trans. of Geomagnetizm i Aeronomiya (USSR) 1961, v. 1, no. 4, p. 599-605.

Portions of this report will not reproduce well.

DESCRIPTORS: Barents Sea, *Ocean currents, Oceanography, Electric currents, Geophysics, Earth, Vibration.

This article deals with variations in marine telluric fields. The measurements were made in 1955, with an electromagnetic measuring device, in currents of the Barents Sea. Electrical oscillations in the sea are compared with magnetic data for the Matochkin Shar, Bukhta Tikhaya and Murmansk stations. (Author)

Geinrikh, A. K.
THE BASIC TYPES OF VERTICAL DISTRIBUTION OF COPEPODS IN THE CENTRAL PACIFIC OCEAN (Osnovnye Typy Vertikal'nogo Raspredeleniya Kopepod v Tsentral'noi Chasti Tikhogo Okeana) tr. by Donald A. Thomson. 1961, 6p. 3 refs.
Order from OTS or SLA $1.10 62-15292

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 132, no. 4, p. 921-924.

DESCRIPTORS: *Aquatic animals, Marine biology, Distribution, Tropical regions, Pacific Ocean.

Geinrikh, A. K.
THE HORIZONTAL DISTRIBUTION OF COPEPODS IN THE CENTRAL PACIFIC AND THE FACTORS DETERMINING IT (Gorizontal'noe Raspredelenie Kopepod v Tsentral'noi Chasti Tokhogo Okeana i Opredelyayushchie Ego Faktory) tr. by Donald A. Thomson. 1961, 14p. 20 refs.
Order from OTS or SLA $1.60 62-15291

Trans. of Akademiya Nauk SSR. Institut Okeanologii. Trudy, 1960, v. 41, p. 31-41.

DESCRIPTORS: *Aquatic animals, Marine biology, Distribution, Tropical regions, Pacific Ocean.

Geinrikh, A. K.
THE SURFACE PLANKTON OF THE CENTRAL PACIFIC (O Pripoverkhnostnom Planktone Tsentral'noi Chasti Tokhogo Okeana) tr. by Donald A. Thomson. 1961, 8p. 5 refs.
Order from OTS or SLA $1.10 62-15290

Trans. of Akademiya Nauk SSSR. Institut Okeanologii. Trudy, 1960, v. 41, p. 42-47.

DESCRIPTORS: *Aquatic animals, Marine biology, Pacific Ocean, Distribution, Oceans, Surface properties

In the surface waters of the central Pacific the copepods, particularly the family Pontellidae, predominate in numbers. The majority of species of pontellids were encountered everywhere in the central part of the ocean from latitude 33°N to latitude 33°S at longitude 174°W and longitude 172°E. The numbers of some species of pontellids drop sharply in the areas of low salinity (doldrums), and they are rarely encountered there. Pontella fera was distributed only within the borders of the low salinity area. Pontella whiteleggei was distributed in the southern subtropical zone of convergence. Strong numerical dominance of single copepod species was observed in the surface waters, with different species predominating in different areas. (Author)

Kryndin, A. N.
MAIDEN VOYAGE OF THE RESEARCH VESSEL YU. M. SHOKAL'SKII AND ITS SCIENTIFIC RESULTS. 15 Feb 62, 25p. 3 refs. JPRS: 12493.
Order from OTS $0.75 62-11169

Trans. of Okeanologiya (USSR) 1961, v. 1, no. 3, p. 543-549.

DESCRIPTORS: *Oceanographic vessels, Oceanographic data, Hydrology, Meteorology, Red Sea, Indian Ocean, Pacific Ocean, Temperature, Salinity, Oxygen, Abundance.

Neiman, A. A.
CERTAIN MECHANISMS IN THE QUANTITATIVE DISTRIBUTION OF BENTHOS IN THE BERING SEA. 9 Jan 62 [28]p. 30 refs. JPRS: 11846.
Order from OTS or SLA $2.60 62-15505

Trans. of Okeanologiya (USSR) 1961, v. 1, no. 2, p. 294-304.

DESCRIPTORS: *Oceanographical charts, Bering Sea, *Marine biology, Distribution, Quantitative analysis, Fishes, *Nutrition, Bibliography, *Ocean bottom.

The distribution of trophic zones on the shelf, depending on its width, conform to the following law: all three trophic zones are well defined on the same shelf only in those cases where the shelf is sufficiently broad and there are sufficiently vast sections with intensive sediment accumulation on it. As the shelf declines in width and the sections of sediment accumulation are diminished in the limits of the shelf itself, the zone of filtrators expands, and the zone of collectors decreases and is displaced to a greater depth. With a still greater increase in the steepness of the shelf, the zone of collectors contracts still further or even disappears; the zone of filtrators expands still more and the zone of those which swallow the soil at random is displaced still deeper. (Extract)

Sysoev, N. N.
THE ANCHOR DRIFTOGRAPH, tr. by E. R. Hope. Jan 62 [5]p. 3 refs. DSIS-T-364-R.
Order from NRCC NRCC-C-3898

Trans. of [Akademiya Nauk SSSR]. Institut Okeanologii. Trudy, 1951, v. 5, p. 46-49.

DESCRIPTORS: Anchors, *Sea anchors, Drift, *Recording devices, Ocean currents.

Tseng, Ch'eng-k'uei.
A DECADE OF MARINE BIOLOGY IN CHINA. 13 Nov 61 [17]p. JPRS: 11104.
Order from OTS or SLA $1.60 62-13526

Trans. of Hai Yang Yu Hu Chao (Chinese People's Republic) 1959, v. 2, no. 4, p. 203-212.

DESCRIPTORS: *Marine biology, Ecology, Plants, Animals, Scientific reports, China

Physics of the Atmosphere

Faraponova, G. P.
MEASUREMENTS OF THE ATTENUATION OF SUNLIGHT IN THE FREE ATMOSPHERE. 1961, 16p.
Order from CTT $32.00 CTT-61M1

Trans. of Tsentral'naya Aerologicheskaya Observatoriya. Trudy (USSR) 1959, no. 32, p. 3-36.

DESCRIPTORS: *Atmosphere, *Light, Attenuation

Gusev, V. D. and Gailit, T. A.
THE AUTOMATIC PROCESSING OF EXPERIMENTAL DATA IN THE INVESTIGATION OF THE IRREGULAR IONOSPHERE [Ob Avtomatizatsii Obrabotki Eksperimental'nykh Dannykh pri Issledovanii Neregulyarnoi Ionosfere]. [1961] [8]p. 5 refs. [DSIR NLL] M. 4622.
Order from OTS or SLA $1.10 62-15696

Trans. of Moscow U. Vestnik. [Seriya 3: Fizika, Astronomiya] (USSR) 1960 [v. 15] no. 1, p. 39-[49]. Another trans. is available from OTS $0.75 as 60-41724, JPRS-5987, 1 Nov 60, 20p.

DESCRIPTORS: Experimental data, Processing, *Correlation techniques, *Data processing systems, Operation, *Ionosphere, *Ionospheric disturbances Statistical functions.

Kastrov, V. G.
CONCERNING THE ASYMMETRY OF LIGHT SCATTERING IN THE ATMOSPHERE. 1961, 3p.
Order from CTT $6.00 CTT-61M2

Trans. of Tsentral'naya Aerologicheskaya Observatoriya. Trudy (USSR) 1959, no. 32, p. 84-87.

DESCRIPTORS: *Light, Scattering, *Atmosphere.

Kolegov, G. A.
VARIATIONS IN UPPER ATMOSPHERE DENSITY BASED ON OBSERVED CHANGES IN THE PERIOD OF REVOLUTION OF ARTIFICIAL SATELLITES. [1962] 3p. 5 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of [Iskusstvennye Sputniki Zemli] (USSR) 1960, v. 4, p. 31-34.
Abstract trans. is available from LC or SLA mi$2.70, ph$4.80 in 61-15182, AID 60-96, 30 Nov 60 [21]p.

DESCRIPTORS: *Upper atmosphere, Atmosphere, Density, Drag, Aerodynamics, Diurnal variations, *Satellite vehicle research.

Presnyakov, A.
SECRETS OF THE OCEAN OF AIR. 1 Dec 61 [4]p. FTD-TT-61-283; AD-268 066.
Order from OTS or SLA $1.10 62-15177

Unedited rough draft trans. from Ekonomicheskaya Gazeta (USSR) 1961, no. 7, p. 34.

DESCRIPTORS: Atoms, *Recombination reactions, *Dissociation, Energy, *Atmosphere, Recombination ramjet engines, Free radicals, Gases.

A review is presented of the book, Secrets of the Ocean of Air, by A. Yu. Preobrazhenskiy.

ENGINEERING

NLL TRANSLATIONS BULLETIN, 1962, VOL. 4, NO. 1. Jan 62. 106p.
Order from HMSO $0.77, $9.86/year

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DESCRIPTORS: *Automation, Radio equipment, Electronic equipment, Reliability, Maintenance, Probability Control systems, Telemeter systems, Computers, Digital computers, Automatic, Industrial production, Feedback, *Organolites, *Chemical engineering, Chemical industry, *Machines, Construction, *Remote control systems, Strainers.

Contents:
##Brief information on the work of the Institute of Machine Construction and Automation of the Academy of Sciences of the Ukrainian SSR in the field of automation, remote control and metering techniques, by H. H. Maksimovich
Production and use of molecular sieves in the USSR, by A. V. Agafonov and others
Co-ordination, a powerful means of developing new techniques.

Abramov, F. A. and Miletich, A. F.
BEPALING VAN DE AERODYNAMISCHE WEERSTANDS COEFFICIENTEN VAN MIJNGANGEN MET NIEUWE TYPEN ONDERSTEUNINGEN (Determination of the Aerodynamic Resistance Coefficients of Mine Shafts with New Types of Supports) tr. by G. J. M. Fritschy. 5p. MTWL: 305. (text in Dutch).
Order from OTS or ETC $1.40 61-17959

Trans. of Gornyi Zhurnal (USSR) 1949, v. 123, no. 1, p. 36-37.

DESCRIPTORS: *Underground structures, Aerodynamics, *Ventilation, Resistance, Gas flow.

Averyanov, C. F.
BENADERENDE BEPALING VAN DE INVLOED VAN FILTRATIE IN DE CAPILLAIRE ZONE (Approximate Determination of the Effect of Filtration in the Capillary Zone). 9p. 13 refs. MTWL: 316. (text in Dutch).
Order from OTS or ETC $1.55 61-17952

Trans. of Akademiya Nauk SSSR. Doklady. 1949, v. 69, no. 3, p. 309-312.

DESCRIPTORS: Civil engineering, *Hydrology, Fluid flow, Irrigation systems, Permeability.

Belov, Yu. D., Kunyaev, E. V., and Okhrimenko, V. A.
STRATA PRESSURE IN LEVEL SEAMS WORKED BY HYDRAULIC MINING. [1961] [11]p. NCB Trans. A.1741/JG; [DSIR NLL] M.3288.
Order from OTS or SLA $1.60 62-15268

Trans. of Ugol' (USSR) 1959 [v. 34] no. 1, p. 33-38.

DESCRIPTORS: Coal, Production, *Mining engineering, Engineering, Rock, Pressure.

Garkavi, S. M. and Zvyagin, P. Z.
COMPARATIVE EFFECTIVENESS OF PANEL AND HORIZON DEVELOPMENT METHODS [O Sravnitel'noi Effektivnosti Panel'nogo i Etazhnogo Sposobov Podgotovki Shakhtnykh Polei]. [1961] [5]p. NCB Trans. A.1931/JG; [DSIR NLL] M.3287.
Order from OTS or SLA $1.10 62-15259

Trans. of Ugol' Ukrainy (USSR) [1961] v. 4, no. 5, p. 41-42.

DESCRIPTORS: *Mining engineering, Engineering, Coal, Mines, Labor, Economics, Production, Loading, Transportation, Effectiveness.

Greshishkin, A. D.
MECHANISED WITHDRAWAL OF BREAKER PROPS WITH LOWERING OF THE ROOF. [1961] [4]p. NCB Trans. A.1929/JG; [DSIR NLL] M.3290.
Order from OTS or SLA $1.10 62-15261

Trans. of Ugol' Ukrainy (USSR) 1960, v. 4, no. 5, p. 28-29

DESCRIPTORS: *Mining engineering, Engineering, Coal, Production, Machines

Tsaritsyn, V. V.
THEORIE EN BEREKENING VAN HET SLAAND BOREN (Theory and Calculation of Drilling) tr. by G. J. M. Fritschy. 26p. MTWL: 312. (text in Dutch).
Order from OTS or ETC $2.37 61-17948

Trans. of Gornyi Zhurnal (USSR) 1948, v. 122, no. 8, p. 18-26.

DESCRIPTORS: *Drilling machines, Mining engineering, *Mechanics.

Aeronautical Engineering

NEWS OF THE INSTITUTES OF HIGHER LEARNING, AERONAUTICAL ENGINEERING, 1960, NO. 4: SELECTED ARTICLES. 16 Jan 62 [32]p. 6 refs. FTD-TT-61-189; AD-270 783.
Order from OTS or SLA $3.60 62-15816

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Aviatsionnaya Tekhnika (USSR) 1960, no. 4, p. 10-30.

DESCRIPTORS: *Supersonic planes, Wings, Wing-body configurations, Aerodynamics, Stability, Mathematical analysis, Particle trajectories, Satellite vehicle trajectories, Orbital flight paths.

Contents:
The self-balancing of supersonic wings with variable dihedral of the leading edge, by E. V. Bulygina
Solution of the extreme problem of the movement of a point having variable mass, by I. F. Vereshchagin.

Karnozhitskii, V. P.
THE EFFECT OF TEMPERATURE STRESSES ON THE STABILITY OF A SANDWICH WING PANEL. 1 Dec 61 [15]p. 5 refs. FTD-TT-61-239; AD-268 053.
Order from OTS or SLA $1.60 62-15163

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Aviatsionnaya Tekhnika (USSR) 1961, no. 3, p. 69-77.

DESCRIPTORS: *Wings, Aerodynamic heating, *Sandwich panels, Stresses, Stability, Theory, *Thermal stresses.

This study examines the stability of a sandwich wing panel compressed in one direction in the presence of different temperatures on the upper and lower carrying layers. It is considered that the hypothesis of straight-line normals is valid for the carrying layers. The general relations of the theory of elasticity are used for the core materials; however, it is assumed that the entire compression load is received by the carrying layers and that the core material up to the moment of bulging is free of stresses. The temperature stresses and strains in the core material are not taken into account in view of the small rigidity of the latter. (Author)

Kondrat'ev, P. V.
HELICOPTERS AND THEIR UTILIZATION: CHAPS. 2, 5-6. 7 Feb 61 [24]p. (15 figs. omitted). MCL-776/1+2; AD-258 823.
Order from OTS or SLA $2.60 61-23874

Unedited rough draft trans. of mono. Vertolety i Ikh Primenie, Moscow, 1960, p. 18-24, 78-83, 95-109.

DESCRIPTORS: *Helicopters, Design, *Cockpits, *Instrument panels, *Flight instruments, *Air transportation, *Aerodynamic configurations, *Helicopter rotors, Coaxial helicopter rotors, Control systems, Control panels, Rotor blades.

Contents:
Various helicopter designs
Helicopter flight and helicopter control
Modern helicopters.

Korol'kov, O. N.
CALCULATING THE LOAD FLOOR OF AN AIRCRAFT (Raschet Gruzovogo Pola Samoleta). 7 Dec 61 [18]p. 6 refs. FTD-TT-61-204; AD-269 152.
Order from OTS or SLA $1.60 62-15283

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Aviatsionnaya Tekhnika (USSR) 1961, no. 3, p. 78-88.

DESCRIPTORS: Airframes, *Fuselages, Floors, Stresses, Design, Elasticity, Moments, Mathematical analysis.

The elasticity of the fuselage does exert a considerable effect on the magnitude of bending moments of non-sandwiched longitudinal beams. In some instances, when on account of fuselage elasticity there is a sharp rise in the calculated moments of the beams, it is more convenient to change into longitudinal sandwich beams. The approximate method of calculating floor cover with consideration of fuselage elasticity, suggested in the report, is very simple and warrants sufficient accuracy for practical calculations. (Author)

Ponedel'nik, V.
A BOAT IN THE STRATOSPHERE. 1 Dec 61 [3]p. FTD-TT-61-258; AD-268 056.
Order from OTS or SLA $1.10 62-15181

Unedited rough draft trans. from Izvestiya (USSR) 1961, 17 Sep.

DESCRIPTORS: *Flying boats, Jet planes, Records, Flight speeds, Flight paths, Flight testing.

Eleven world records were set with the "M-10 domestic seaplane, with jet engines. It reached an altitude of 14,042 meters carrying a five-tone load; and set two records for one and two-ton loads. Then, without a load it reached an altitude of 14,742 meters; with a ten-ton load it reached 12,700 meters; then 12,120 meters with a 15-ton load; and with the maximum load, 15,204 kilograms, it climbed to over two kilometers. Later, carrying five tons, it covered a distance of 1,000 kilometers, attaining the record speed of 875.86 kilometers per hour. At this time, four speed records were set: without load, and with five, two and one-ton loads. (Extract)

Chemical Engineering

CHEMISTRY HELPING TO BUILD SOCIALISM IN RUMANIA: FIFTEEN YEARS OF ACHIEVEMENT (La Chimie au Service de l'Edification du Socialisme - Quinze Ans de Realisations). 27 Jan 61 [11]p. JPRS: 7667.
Order from OTS or SLA $1.60 62-19335

Trans. of Revue de Chimie (Rumania) 1959, v. 4, no. 2, p. 133-139.

DESCRIPTORS: Chemical industry, Industry, *Chemical engineering, Economics, *Rumania.

OVER DE KWALITEIT VAN ZWARE STOOKOLIEN (The Quality of Heavy Oils). 4p. MTWL: 380. (text in Dutch).
Order from OTS or ETC $1.40 61-32032

Trans. of Energeticheskii Byulletin' (USSR) 1949, no. 4, p. 27-28.

DESCRIPTORS: *Fuel oil, Quality control.

Abezgauz, I. M.
METHOD FOR THE DETERMINATION OF THE CONTENT OF SOLID HYDROCARBONS IN PETROLATUM. 16p. MTWL: 272.
Order from OTS or ETC $1.85 61-17987

Trans. of Azerbaidzhanskoe Neftyanoe Khozyaistvo (USSR) 1938, v. 18, no. 4, p. 49-53.

DESCRIPTORS: Mineral oils, *Hydrocarbons, Solids, *Determination, Solutions.

Bogdanov, N. F.
NORMAL VACUUM DISTILLATION OF HEAVY OIL PRODUCTS. 13p. 2 refs. MTWL: 390.
Order from OTS or ETC $1.85 61-32028

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 10, p. 48-52.

DESCRIPTORS: Distilling plants, Vacuum apparatus, Fuel oils, Lubrication, *Oils, *Fractionation, Laboratory equipments, Analysis.

Fürst, L.
PRODUCTION OF VASELINE FROM PETROLATUM. COMMENTS ON THE ARTICLE BY TOKMANOV AND RODZAEVSKAYA. 6p. 4 refs. MTWL: 274.
Order from OTS or ETC $1.55 61-17989

Trans. of Azerbaidzhanskoe Neftyanoe Khozyaistvo (USSR) 1934, v. 14, no. 11-12, p. 113-114.

DESCRIPTORS: Aliphatic compounds, Sulfuric acid, Tests. *Mineral oils, *Purification.

Hal'pern, G. D.
COMPARATIVE INVESTIGATION OF VARIOUS OILS OF THE USSR .COMMUNICATION 2. HYDROCARBONS OF THE GASOLINE-KEROSINE FRACTIONS OF LIGHT OILS OF VARIOUS AGE. 16p. 5 refs. MTWL: 276.
Order from OTS or ETC $1.85 61-17991

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya, 1941, no. 4, p. 45-54.

DESCRIPTORS: *Gasoline, Kerosine, Hydrocarbons, *Refractive index, *Phenols, Determination, Mineral oils.

Kantorovich, B. V.
OVER DE INVLOED VAN DE DRUK EN DE GAS-CONCENTRATIE OP DE LENGTE DER REACTIEZONE BIJ HETEROGENE PROCESSEN (The Effect of the Gas Pressure and Concentration on the Length of the Reactionzone in Heterogeneous Processes) tr. by G. J. M. Fritschy. 7p. 3 refs. MTWL: 339. (text in Dutch).
Order from OTS or ETC $1.55 61-17933

Trans. of Akademiya Nauk SSSR. Doklady. 1950, v. 71, p. 315-318.

DESCRIPTORS: Chemical reactions, *Reaction kinetics, *Generators, Gas flow, Solids.

Kogan, I. B.
ALARMTOESTELLEN VOOR GEVAARLIJKE CONCENTRATIES VAN SCHADELIJKE STOFFEN IN LUCHT. III. ALARMTOESTEL VOOR STIKSTOFDIOXYDE (Warning Devices for Dangerous Concentrations of Harmful Products in Air. III. Warning Device for Nitrogen Dioxide) tr. by G. J. M. Fritschy. 7p. 9 refs. MTWL: 337. (text in Dutch).
Order from OTS or ETC $1.55 61-17931

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, p. 41-44.

DESCRIPTORS: Air, Poisons, *Toxic agents alarms, *Nitrogen compounds, *Dioxides.

Krupchitskii, A. A.
DESIGN FEATURES OF LARGE-SCALE WATER-TREATMENT PLANTS FOR POWER STATIONS WITH HIGH CONDENSATE LOSS. [1961] [8]p. 3 refs. C. E. Trans. 1880; [DSIR LLU] M. 3298.
Order from OTS or SLA $1.10 61-27607

Trans. of Teploenergetika (USSR) 1960, v. 7, no. 6, p. 58-62.

DESCRIPTORS: *Power plants, *Distilling plants, Water, *Water supplies, Purification, Desalination, Silicates, Reduction, Magnesium compounds, Carbonates Reagents, Design, Storage, *Feed water.

Problems in the selection of efficient arrangements of large-scale water-treatment plants for power stations with high condensate loss are outlined. Solutions arrived at regarding layout and mechanisation of storage arrangements for these plants are discussed. (Author)

Lapuk, B. B.
PRESSURE DISTRIBUTION IN GAS DEPOSITS. 21p. 4 refs. MTWL: 241.
Order from OTS or ETC $1.85 61-17901

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 4, p. 26-32.

DESCRIPTORS: *Gases, *Deposits, Pressure, Theory.

Orlov, N. A., Shestakovskii, M. F., and Shabarov, V. V.
THE MANUFACTURE OF CYCLOHEXANOL tr. by G. J. M. Fritschy. 7p. 6 refs. MTWL: 334.
Order from OTS or ETC $1.55 61-17928

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1934, v.7, p. 760-763.

DESCRIPTORS: *Cyclohexanols, *Phenols, Hydrogenation, Nickel catalysts.

Planovskii, A. N.
OVER DE THEORIE VAN CONTINUE PROCESSEN. II. (The Theory of Continuous Processes. II. tr. by G. J. M. Fritschy. 15p. MTWL: 216. (text in Dutch).
Order from OTS or ETC $1.85 61-17920

Trans. of Khimicheskaya Promyshlennost' (USSR) 1944, no. 6, p. 5-9.

DESCRIPTORS: *Processing, *Chemical engineering, Chemical reactions, Theory.

Susanov, E. Ya.
OVER DE METHODOLOGIE BIJ HET "PLANNEN" VAN EEN GECOMBINEERD PROCES VAN DESTILLATIE EN KRAKEN VAN AARDOLIE IN EEN DUBBEL-OVEN-KRAAKINSTALLATIE (Method of Planning the Combined Process of Distillation and Cracking of Crude Oil in Two-furnace Cracking Plants) 8p. MTWL: 238. (text in Dutch).
Order from OTS or ETC $1.55 61-17912

Trans. of Neftyanoe Khozyaistvo, (USSR) 1948, v. 26, no. 12, p. 22-25.

DESCRIPTORS: Mineral oils, Distilling plants, Fractionation, *Hydrocarbons, *Decomposition.

Torocheshnikov, N. S. and Gurevich, Ts. N.
DIE VERFLÜSSIGUNG VIELKOMPONENTIGER GASGEMISCHE BEI TIEFEN TEMPERATUREN (Compressing Gases Containing Several Components at Low Temperature) tr. by I. Erkelens-Klowatzki and G. J. M. Fritschy. 14p. 14 refs. MTWL: 219. (text in German).
Order from OTS or ETC $1.85 61-17923

Trans. of Zhurnal Khimicheskoi Promyshlennosti (USSR) 1941, v. 18, no. 5, p. 7-13.
A trans. in English is available from OTS or SLA $1.10 as 61-16922 [1961] 11p.

DESCRIPTORS: High pressure research, *Low temperature research, *Liquified gases.

Tsvetkova, M. A.
STRUCTUURVERANDERING VAN DE POREUZE RUIMTE IN OLIEGESTEENTERESERVOIRS ONDER INVLOED VAN ZOUTZUUR (Structural Change of Porosity of Petroleum-collecting Rocks by Treatment with Hydrochloric Acid). 7p. 4 refs. MTWL: 324. (text in Dutch).
Order from OTS or ETC $1.55 61-17938

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 69, no. 4, p. 581-584.

DESCRIPTORS: *Mineral oils, *Rock, *Porosity, Boreholes, Hydrochloric acid.

Yurkevich, I. A.
PROPERTIES OF THE ORGANIC MATTER IN SEDIMENTS. 8p. 7 refs. MTWL: 267.
Order from OTS or ETC $1.55 61-17880

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 5, p. 881-884.

DESCRIPTORS: Sedimentation, Geochemistry, *Mineral oils, Sources, *Organic materials.

Zelinskii, N. D., Musaev, I. A., and Hal'pern, G. D.
ANALYSIS OF KOSS-CHAGYL OIL (EMBA). COMMUNICATION 2. CATALYTIC DEHYDROGENATION OF NARROW GASOLINE-KEROSENE FRACTIONS. 15p. MTWL: 277.
Order from OTS or ETC $1.85 61-17992

Trans. of Akademiya Nauk SSSR. [Otdelenie Khimicheskikh Nauk]. Izvestiya, 1937, p. 467-468.

DESCRIPTORS: *Gasoline, Kerosene, *Dehydrogenation, Platinum, Catalyst.

Zelinskii, N. D. and Hal'pern, G. D.
INVESTIGATION OF THE JURASSIC OIL FROM THE KOSTCHAGYL OIL DEPOSIT. COMMUNICATION 3. CORRECTED DATA REGARDING THE COMPOSITION OF THE GASOLINE-KEROSINE FRACTIONS. 13p. 11 refs. MTWL: 275.
Order from OTS or ETC $1.85 61-17990

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya, 1941, no. 5, p. 3-10.

DESCRIPTORS: *Gasoline, Kerosine, Mineral oils, Analysis, *Dehydrogenation, Catalysts.

Zherdeva, L.
VASELINES FROM GROZNY PETROLATUM. 7p. 8 refs. MTWL: 273.
Order from OTS or ETC $1.55 61-17988

Trans. of Azerbaidzhanskoe Neftyanoe Khozyaistvo (USSR) 1932, v. 12, no. 12, p. 86-87.

DESCRIPTORS: Aliphatic compounds, Sulfuric acid, Tests, *Mineral oils, *Purification.

Electrical and Electronic Engineering

POWER EQUIPMENT AND ELECTRICAL APPARATUS. Soviet Machine Building: Selected Translations no. 42. 17 Feb 61 [57]p. JPRS: 7764.
Order from OTS or SLA $5.60 62-23483

Trans. of Agitator (USSR) 1960, no. 15, p. 13-15; Energomashinostroenie (USSR) 1960 [v. 6, no. 7] p. 18, 27-28; Vestnik Elektropromyshlennosti (USSR) 1960 [v. 3, no. 7] p. 5-17; [no. 8] p. 1-3, 30, 34, 47.

DESCRIPTORS: *Power supplies, *Electrical equipment, Electrical engineering, Electrical industry, Industrial production, Economics, Air, Compressors, Gas turbines, Conferences, Starting, Operation, Electric motors, Circuit breakers, Mercury, Voltage, Rectifiers, Design, Electric power production.

Contents:
Gas turbine, by N. Pokidov
A compressor of the Nevskii Machine-Building Plant imeni Lenin, by O. M. Kiselev
Scientific and technical conference on the exchange of know-how in starting and adjusting gas turbines, by Yu. P. Grachev
Awarding of prizes to participants at the 1959 exposition on the achievements of the national economy (new products of USSR electrical industry) by R. P. Vcherashnii and M. A. Borisov
The electrical engineering industry of Moscow on the upswing, by B. Sh. Tabachnik
Along the road of technical progress, by P. M. Ipatov
For the implementation of the decisions of the Plenum of the Central Committee of the Communist Party of the Soviet Union
Experience in adjusting and operating the STM-12000-2 synchronous electric motor, by V. S. Goroneskul'
New circuit breaker
Special high-voltage rectifier.

Byalyi, L. I.
A METHOD FOR AUTOMATICALLY SETTING THE LIMITING LEVEL WHEN RECEIVING BINARY SIGNALS. 29 Nov 61 [4]p. FTD-TT-61-209; AD-268 051.
Order from OTS or SLA $1.10 62-15167

Unedited rough draft trans. of #Byulleten' Izobretenii (USSR) 1960, no. 16, p. 17-18 (Russian patent 130929).

DESCRIPTORS: *Signal-to-noise ratio, *Radio signals, Sequences, Radio receivers, Errors, Data transmission systems, Noise generators, *Noise (Radar), *Noise (Radio).

To reduce the probability of error when receiving a binary train, the received signal train is integrated in a time which is greater than the duration of the individual transmission, but less than the signal fading time. The integrated value of the noise created during the reception by a noise generator and controlled by an AGC common to the entire system, is subtracted from the obtained value, and the required limiting level is determined from the obtained difference and the value of the noise of the generator by means of a functional converter.

Chilczuk, Michal.
PROBLEMS OF THE ECONOMIC UTILIZATION OF THE DUNAJEC RIVER IN POLAND (Z Zagadnien Zagospodarowania Dunajca). 31 Mar 61 [31]p. 8 refs. JPRS: 9015.
Order from OTS or SLA $3.60 62-19320

Trans. of Nauka Polska, 1960 [v. 8] no. 1, p. 53-77.

DESCRIPTORS: *Inland waterways, *Water supplies, Consumption, Economics, Hydraulic reservoirs, *Electric power production, *Power plants, *Poland

Gukov, V. I.
REPRODUCING SYSTEMS CORRECTION WITH THE AID OF FILTERS BASED ON LAG ELEMENTS. 2 Aug 61 [18]p. 9 refs. JPRS: 4831.
Order from OTS or SLA $1.60 61-27866

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Energetika i Avtomatika, 1961, no. 2, p. 134-143.

DESCRIPTORS: *Linear systems, Sound reproduction systems, Data transmission systems, Hysteresis, Distortion, Corrections, *Transients, *Electric filters, Time delay relays, Delay lines, Time lag theory.

Kaganova, L. I.
SEMICONDUCTOR FREQUENCY CONVERTER (HETERODYNE CONVERSION TRANSDUCER) FOR FEEDING MAGNETIC AMPLIFIERS. [1961] 8p. (4 figs. omitted) 5 refs.
Order from OTS or SLA $1.10 62-10721

Trans. of Vestnik Elektropromyshlennosti (USSR) 1961, v. 32, no. 7, p. 49-51.

DESCRIPTORS: *Magnetic amplifiers, Amplifiers, Power supplies, Semiconductors, *Frequency converters, Transducers, Design, Operation.

The described semiconductor device is designed for the purpose of feeding magnetic amplifiers with a frequency voltage of 450 to 500 cycles per second. The output power of the frequency converter is 250 to 300 watts and the voltage at the output is 110 volts. The converter satisfies the high requirements of frequency stability; under external influences, the frequency variations do not go beyond the threshold of plus or minus 2.5%. The oscillation form of the output voltage is close to being rectangular. (Author)

Kniazeff, Georges and Abraham, Pierre-Albert-Maurice.
APPARATUS FOR MORE PRECISE BEARING DETERMINATION OF AN OBSTACLE DETECTED BY RADAR, tr. by J. B. 6 Dec 61 20p. (14 figs. omitted).
Order from OTS or SLA $1.60 62-13879

Trans. of French patent 1,147,248, gr. 12, cl. 4, internal. cl. H o4p, by Société Industrielle des Nouvelles Techniques Radioélectriques, appl. 30 Mar 56, granted 3 June 57, pub. 20 Nov 57.

DESCRIPTORS: Airplanes, *Detection, *Radar pulses, Radar echo areas, Radar equipment, *Memory devices, Radar reflections, Radar antennas, Target detection.

The apparatus contains several identical memory device units. The memory of each of these units is assigned to signals corresponding to various distances proportioned as a function of the required distance resolution. The units are respectively assigned to successive echoes whose amplitude exceeds a determined threshold and which can be received during each passage of the radar beam over the object. The memories of all these units are connected by a many so-called reading lines to a statistical device which determines, according to the number and distribution in time of echoes received during each passage of the beam over the object, the instant at which the beam axis passes over the object, and emitting a signal shifted for a determined time and constant with respect to said instant.

Kuznetsov, S. M.
ESTIMATING THE RELIABILITY OF AUTOMATION SYSTEMS FROM THE RESULTS OF TESTS OF AN INCOMPLETE APPARATUS STRUCTURE. 21 Nov 61 [19]p. 3 refs. FTD-TT-61-199; AD-267 715.

Unedited rough draft trans. of Avtomatika i Telemekhanika (USSR) [1961] v. 22, no. 8, p. 1108-1116.

DESCRIPTORS: *Automation, *Reliability, Failure (Mechanics), Probability, Statistical analysis, Statistical distributions.

An estimate of the reliability of systems from the results of tests of an incomplete apparatus structure can be made by the differentiated method by combining statistical and indirect analytical methods of estimating errors in a system from groups of monotypic elements contained in tested and untested devices in the system. The accuracy and reliability of such an estimate depend substantially on the homogeneity of the structure of the system and on the ratio between the volumes of the element groups contained in the tested and untested devices. (Author)

Markov, M. N.
INPUT SIGNAL AMPLIFIER FROM A BOLOMETER WITH A SEMICONDUCTOR TRIODE. 24 Jan 62 [6]p. 5 refs. Trans. Log. no. 1281-S.
Order from OTS or SLA $1.10 62-15726

Trans. of #Pribory i Tekhnika Eksperimenta (USSR) 1961 [no. 2] p. 118-119.

DESCRIPTORS: *Bolometers, *Amplifiers, *Semiconductors, *Triodes, Signal-to-noise ratio.

Office of Technical Services, Dept. of Commerce, Washington, D. C.
FUEL CELLS AND RELATED RESEARCH. Dec 61, 9p. 122 refs. OTS Selective Bibliography SB-447, rev.
Order from OTS $0.10 OTS SB-447, Revised

DESCRIPTORS: *Fuel cells, *Bibliography, Electrochemistry, Power, Temperature, Electrolytes, Materials, Hydrogen, Nitrogen compounds, Oxyfluorides, Solar cells, Electric propulsion

Lists 122 foreign and domestic references of fuel cells and research leading to development on fuel cells added to the OTS collection up to January 1, 1962. Includes reports on electrochemical power systems; low temperature and high temperature fuel cells; solid electrolytes for fuel cells; fossil fuels and other fuel cell materials; generation of hydrogen for fuel cell systems; nitrosyl chloride solar regenerative fuel cell systems among other subjects.

Rozanov, A. V. and Kukhtenko, V. I.
METHOD OF DESIGNING AN AUTOMATIC CONTROL SYSTEM WITH NEARLY OPTIMUM TRANSIENT CONDITIONS. 8 Nov 61 [10]p. (8 figs. omitted). JPRS: 10948.
Order from OTS or SLA $1.10 62-13016

Trans. of Samoletnoe Elektrooborudovanie (USSR) 1960 [v. 1] no. 1, p. 63-69.

DESCRIPTORS: Automatic, *Control systems, Design, Transients, Mathematical analysis, Differential equations.

A method is described for designing an automatic control system, which can be described by a differential equation of the second order, and in which an optimum transient process is realized. The results thus obtained are used to secure nearly optimum conditions in a system of a higher order.

Skanavi, G. I. and Neiman, M. D.
SPANNINGSSTABILISATIE DOOR TOEPASSING VAN BARIUM TITANAAT CONDENSATOREN (Stabilizatsiya Napryazheniya s Primeneniem Kondensatorov iz Titanata Bariya) (Voltage Stabilization by Application of Barium Titanate Capacitors) tr. by G. B. J. Overbeek. 15p. 3 refs. MTWL: 372. (text in Dutch).
Order from OTS or ETC $1.85 61-32035

Trans. of Elektrichestvo (USSR) 1949, no. 7, p. 43-46

DESCRIPTORS: *Barium compounds, *Titanates, Capacitors, *Voltage regulators.

Sorin, A. M.
MODERNIZATION OF THE ASP TYPE EMERGENCY RADIO TRANSMITTERS. [1961] 4p. (3 figs. omitted)
Order from OTS or SLA $1.10 62-13083

Trans. of Sudostroenie (USSR) 1957 [v. 23] no. 6, p. 29-31.

DESCRIPTORS: *Merchant vessels, *Radio transmitters, Shipborne, Design, Operation, Reliability, Hydrodynamics

The ASP type emergency ship radio transmitter is used aboard the Soviet Merchant Marine ships in order to provide radio communication in case the principal ship radio transmitter or ship electric system fails. When modernizing a radio transmitter, a design should be selected which meets all basic requirements of the Marine Register of the USSR and of the international conventions on the problems of safety in navigation. (Author)

Sukhanov, V. and Kireev, A.
ROD-TYPE VALVES (PRINCIPLE OF OPERATION AND CONSTRUCTION). [1961] [8]p. [DSIR NLL] M. 4619.
Order from OTS or SLA $1.10 62-15693

Trans. of Radio [Moscow] (USSR) 1960, no. 7, p. 34-38.

DESCRIPTORS: Subminiature electronic equipment, *Valves, Design, *Rods, Anodes, Cathodes, Electrons, *Control valves, Wire, High frequency, Impedance

Instead of grids to shape and control the stream of electrons rigid metal rods, positioned in a definite way between the anode and the cathode, are employed.

Tsypkin, Ya. [Z.].
OPTIMAL PROCESSES IN SAMPLED-DATA CONTROL SYSTEMS. [1961] [39]p. 13 refs.
Order from OTS or SLA $3.60 62-10177

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Energetika i Avtomatika, 1960, no. 4, p. 74-93.
Other translations are available from OTS or SLA $2.60 as 62-13704, MDF T-153 [1961] 28p. and from OTS $3.60 as AD-264 158, STL-TR-61-5110-27, July 61, 39p.

DESCRIPTORS: (Digital systems, *Data processing systems, Statistical analysis, *Sampling, *Digital computers, Computer logic, *Control systems, Programming, Equations, Algebra, Operators (Mathematics), Calculus of variations, Difference equations, Control systems, Pulse counters, Pulse analyzers.

Uhle, Karlheinz.
ELECTRIC HIGH VOLTAGE CABLE WITH WOUND INSULATION FILLED WITH A GASEOUS OR LIQUID MEDIUM, tr. by J. R-P. 24 Jan 62, 7p. (7 figs. omitted).
Order from OTS or SLA $1.10 62-15755

Trans. of German Auslegeschrift (DAS) 1,020,075, cl. 21c 7/52, Internat. class. H01b, by Felten & Guilleaume Carlswerk A. G., appl. 30 July 55, announcement and laying open to public inspection 28 Nov 57.

DESCRIPTORS: *Electric cables, Voltage, *Insulating materials, *Electric insulation, Gases, Liquids, Electric discharges, Electric fields.

According to the invention the voids remaining between the individual layers of insulation along the edges of the strips are connected by distributing channels which run across or approximately across the surfaces of the strips comprising the windings of the insulation. These distributing channels together with the voids constitute a channel system that extends not only axially but also radially through the insulating layer and thus makes possible the even distribution of impregnating material or filler gas outward from the interior and vice versa. At the same time the distributing channels, because they sometimes run along the surfaces of the insulating strips, are directed absolutely perpendicular or with a high degree of approximation perpendicular, to the lines of the electric field. Development of electric discharges along these channels in the electric field of the cable which could endanger the insulation is thus prevented. (Extract)

Werner, P.
A METHOD FOR OBJECTIVE EVALUATION OF ELECTROLYTES FOR ELECTROLYTIC CAPACITORS. 1961, 6p.
Order from CTT $12.00 CTT-61E1

Trans. of Nachrichtentechnik (East Germany) 1958, v. 8, p. 467ff.

DESCRIPTORS: *Electrolytic capacitors, Capacitors, Electrolytes.

Zhovinskii, V. N. and Koshelev, V. A.
A DEVICE FOR OBTAINING A SEQUENCE OF NON-CORRELATED RANDOM VOLTAGE PULSES. 20 Nov 61 [4]p. FTD-TT-61-208; AD-267 711.
Order from OTS or SLA $1.10 62-15185

Unedited rough draft trans. of #Byulleten' Izobretenii (USSR) 1960, no. 14, p. 50 (Russian patent 130242).

DESCRIPTORS: *Voltage, Generators, Design.

Units with variable coefficients are used to produce a sequence of non-correlated random voltage pulses.

Ordnance, Missiles, and Satellite Vehicles

CONFERENCE OF ARTIFICAL EARTH SATELLITE OBSERVATION SERVICES IN MOSCOW, 20-27 Jan 61. 11 Jan 62 [6]p. JPRS: 11932.
Order from OTS or SLA $1.10 62-23915

Trans. of Astronautyka (Poland) 1961, v. 4, no. 3, p. 18-19.

DESCRIPTORS: *Satellite vehicles, *Conferences, Astronomical observatories, Tracking.

TRACKING OF MISSILES AND SPACE VEHICLES: REVIEW OF SOVIET LITERATURE. Monthly rept. no. 15 on AID Work Assignment no. 12. 12 Dec 61 [11]p. 8 refs. AID rept. 61-161; AD-269 795.
Order from OTS or SLA $1.60 62-15415

DESCRIPTORS: *Plasma physics, Electromagnetic properties, Ionospheric disturbances, Ions, Meteors, Electrons Density, Ionosphere, Upper atmosphere, Molecules, *Radio astronomy, Extraterrestrial radio waves, Scientific research, Satellite vehicles, Guided missiles, Surface to surface, Radar tracking, Radio interferometers, Tracking.

Contents:
Electromagnetic problems
Ion clouds and ionosphere perturbations
Radioastronomy.

Bakhman, N. N.
KINETIC COMBUSTION CONDITIONS FOR CONDENSED MIXTURES. 20 Dec 61 [9]p. 5 refs. FTD-TT-61-298. AD-269 154
Order from OTS or SLA $1.10 62-15423

Unedited rough draft trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 140, no. 1, p. 141-144.

DESCRIPTORS: *Propellants, *Combustion, *Explosives, Thermodynamics, Gas flow, Particles, Motion.

An extension ispresented of previous studies (Akad. Nauk SSSR Doklady 129: 1079-1081, 1959; available in translation from LC or SLA as 61-19343) of the case where mixing of the components does not influence the combustion rate because it is completed in the preliminary zone between the fresh substance and the reaction zone. The relationship between combustion rate and the size of the component particles is analyzed. (See also 61-13602)

Belokhbostov, V. A. and Sizov, N. I.
ANTI-MISSILE WARHEADS. 2 Jan 62 [10]p. (4 figs. omitted) 16 refs. JPRS: 11793.
Order from OTS or SLA $1.10 62-15359

Trans. of Vestnik Protivovozdushnoi Oborony (USSR) 1961 [v. 1] no. 7, p. 21-24.

DESCRIPTORS: Guided missiles, *Guided missile warheads, *Nuclear warheads, *Fragmentation ammunition, Warheads, Ammunition, Ballistics, Rockets.

The results of United States research are summarized.

Vasilev, V.
LET US TAKE A LOOK INTO THE FUTURE. 4 Dec 61 [5]p. FTD-TT-61-254; AD-268 867.
Order from OTS or SLA $1.10 62-15399

Unedited rough draft trans. from Trud [Moscow] (USSR) 1961, no. 59 (12231) p. 1.

DESCRIPTORS: *Space flight, Guided missiles, Spaceships, Launching, Liquid rocket propellants, Rocket propulsion, Electric propulsion.

Sanitation and Safety Engineering

WATER DEVELOPMENT IN BULGARIA. 26 Apr 61 [31]p. (3 figs. omitted) 20 refs. JPRS: 8160.
Order from OTS or SLA $3.60 62-19414

Trans. of Khidrotekhnika i Melioratsii (Bulgaria) 1960, v. 5, no. 2, p. 56-59; no. 4, p. 103-107; no. 6, p. 165-168.

DESCRIPTORS: Irrigation systems, Dams, *Water supplies, Fishes, Fisheries, Production, Sewage, *Water, Purification, Sanitary engineering, Bulgaria.

Contents:
Problems of pisciculture in connection with the development of hydrotechnical construction in Bulgaria, by M. Nishkov and Stoyan Nikolov
The necessity of full mechanical and biological purification of sewage water from the city of Sofia, by Iv. Ivanovich

The problem of purifying water to supply the city of Sofia, by Rad Pavlov and Al. Bakalov.

Erdos, Konrad and Hum, Istvan.
DEFENSE AGAINST CHEMICAL AND BIOLOGICAL WEAPONS. 8 Mar 61 [7]p. JPRS: 4438.
Order from OTS or SLA $1.10 62-19217

Trans. of Magyar Legoltalom (Hungary) 1961, v. 3, no. 1, p. 20-21.

DESCRIPTORS: *Chemical warfare agents, *Biological warfare agents, Weapons, Aircraft defense systems, National defense, Countermeasures.

Kravtsov, L.
HOW WE STRENGTHEN LABOUR DISCIPLINE (Kak My Ukreplyaem Trudovoyu Distsiplimu) tr. by R. C. Halsall. Oct 59 [2]p. Library communication no. 771; [DSIR NLL] M 1477.
Order from OTS or SLA $1.10 61-13543

Trans. of Avtom[obil'nyi] Transp[ort] (USSR) 1959, v. 37, no. 4, p. 46.

DESCRIPTORS: *Motor vehicle operators, Alcohols, Consumption, Countermeasures, *Alcoholism

Pour, Bohumil.
PROBLEMS OF AIR AND WATER CONTAMINATION IN CZECHOSLOVAKIA. 24 Apr 61 [6]p. JPRS: 4556.
Order from OTS or SLA $1.10 62-19301

Trans. of Priroda a Spolocnost (Czechoslovakia) 1961, v. 10, no. 2, p. 8-11.

DESCRIPTORS: *Air, *Water, *Contamination, Countermeasures.

Schaake, Ulrich.
THE ORGANIZATION OF LOCAL WATER ECONOMY ENTERPRISES IN THE GERMAN DEMOCRATIC REPUBLIC. 6 Nov 61 [10]p. JPRS: 10999.
Order from OTS or SLA $1.10 62-19695

Trans. of Wasserwirtschaft-Wassertechnik (East Germany) 1961, no. 4, p. 147-151.

DESCRIPTORS: Water, *Water supplies, Economics, Sanitary engineering, *East Germany.

Sheleikhovskii, G. V.
SMOKE POLLUTION OF TOWNS, tr. by S. Caspari-Zilberszac. 1961, 203p. 69 refs. PL-480 Comm.
Order from OTS $2.00 60-51074

Trans. of mono. Zadymlenie Gorodov, Moscow/Leningrad, 1949.

DESCRIPTORS: *Smokes, Urban areas, Air, *Contamination, Wind, Gas flow, Toxicity, Atmosphere, Ultraviolet radiation, Visibility, Corrosion, Buildings, Materials, Public health, Industrial plants, *Waste gases, Corrosion, *Corrosive gases, Plants.

This book contains the theoretical basis for a quantitative treatment of the pollution of air by industrial and domestic smoke, and provides numerous formulas for the calculation of air pollution and its influence on the microclimate of populated areas. The author also discusses the protection of urban vegetation from polluted air and its corrosive action on building materials. He indicates practical ways of purifying the atmosphere of thickly-populated areas. The fundamental propositions of the author's theory were tested experimentally on a model; they accord with the results of actual observations. This work is intended as a handbook for engineers and sanitary inspectors concerned with solving the practical problems associated with city planning, particularly the relative location of residential and industrial areas. (Soviet publisher's note)

FOOD, HANDLING, AND PACKAGING EQUIPMENT

Food

BREWING (Pivovarenie). Nov 61 [3]p. 2 refs. RTS 1901.
Order from OTS or SLA $1.10 62-13097

Trans. of Bol'shaya Sovetskaya Entsiklopedia (USSR) 2d ed, n. d., v. 33, p. 14-15.

DESCRIPTORS: *Beer, Beverages, Alcohols, Processing.

The process of beer making is described.

THE BREWING INDUSTRY (Pivovarennaya Promyshlennost'). Nov 61 [4]p. RTS 1902.
Order from OTS or SLA $1.10 62-13098

Trans. of Bol'shaya Sovetskaya Entsiklopedia (USSR) 2d ed., n. d., v. 33, p. 15.

DESCRIPTORS: *Beer, Beverages, Processing.

The brewing industry is expanding in the people's democracies (communist countries). In 1953 the beer output was 400, 000, 000 liters in Poland, 90, 000, 000 liters in Rumaina, 1, 000, 000, 000 liters in Czechoslovakia, and 65, 000, 000 liters in Hungary. In the capitalist countries beer production amounted to 32, 090, 000, 000 liters. A feature of the brewing industry in capitalist countries is its high level of concentration. (Extracted)

LOOKING INTO THE HEART OF COFFEE: NO FEAR OF CAFFEINE. [1962] 3p.
Order from ATS $5.50 ATS-32N57G

Trans. from Film und Frau (West Germany) 1961, v. 13, no. 19.

DESCRIPTORS: *Coffee, *Caffeine, *Food.

Bukhman, N. D.
ALL-UNION CONFERENCE ON THE PROBLEM OF FAT IN NUTRITION (NO. 2). 1 Dec 61 [8]p. JPRS: 11455.
Order from OTS or SLA $1.10 62-13635

Trans. of Voprosy Pitaniya (USSR) 1961 [v. 20] no. 3, p. 91-94.

DESCRIPTORS: *Conferences, *Fats, *Nutrition, Diet, Cholesterol, Heart, Blood circulation, Scientific reports.

Egorov, I. A. and Borisova, N. B.
AROMATIC ALDEHYDES OF COGNAC SPIRITS. 1962, 16p.
Order from K-H $20.00 K-H 9874-a

Trans. of Biokhimiya Vinodeliya (USSR) 1959, v. 5, p. 27-37.

DESCRIPTORS: *Aldehydes, *Alcohols, *Beverages

Sapozhnikova, E. V.
DIASTATISCHE ACTIVITEIT VAN VERSCHILLENDE SOORTEN MEEL (Diastaticheskaya Aktivnost' Muki Raznykh Vidov) (Diastatic Activity of Flour) tr. by M. Albinski. 11p. 7 refs. MTWL: 374.(text in Dutch).
Order from OTS or ETC $1.55 61-32037

Trans. of Biokhimiya (USSR) 1949, v. 14, p. 219-222.

DESCRIPTORS: *Flour, Ptyalin, Quality control, Bread

Schormüller, J. and Adler, G.
NITROGEN BALANCE OF MEAT DURING NATURAL AND ARTIFICIAL MATURING (Die Stickstoffbilanz des Fleisches bei Natürlicher und Künstlicher Reifung) tr. by M. Slade. [1960] [28]p. (foreign text included) 67 refs. Trans. no. 4452.
Order from OTS or SLA $2.60 60-15977

Trans. of Zeitschrift für Lebensmittel-Untersuchung und -Forschung (West Germany) 1959, v. 109, no. 1, p. 13-26.

DESCRIPTORS: *Meat, Aging, Processing, Nitrogen, Chemical properties, Amino acids.

Changes taking place in the nitrogen content of meat during natural maturing and maturing accelerated by the use of meat tenderizers were investigated by drawing-up the N-balance, and by paper-chromatography and column-chromatography. The last method was most suitable for determining the content of free amino acids and peptidic amino acids in trichloroacetic acid extracts of meat subjected to different treatments. After only 6 hours of artificial maturing the total free amino acids are equal to those in meat that has matured naturally for a fortnight. The balance of free amino acids is essentially the same with both methods of maturing: apart from a considerable acceleration of the maturing process by the tenderizer, the amino acid spectrum did not differ as regards the nature and ratios of the free amino acids. (Author)

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

Eichelberg.
A FEW PROBLEMS OF ROUND BORE ENGINES WITH THE EXAMPLE OF THE NSU-WANKEL ENGINE. 1962, 5352 words.
Order from K-H $47.50 K-H-10243

Trans. of an unidentified German language mono., n. p., Aug. 60, 38p.

DESCRIPTORS: *Internal combustion engines.

Suhr, Otto.
CHAIN LINK FOR HIGH CONTINUOUS STRESS, tr. by F. H. B. 22 Jan 62, 3p. (3 figs. omitted).
Order from OTS or SLA $1.10 62-15754

Trans. of German patent 922,386, cl. 47/d, gr. 13, by Gutehoffnungshütte Sterkrade AG, pat. from 13 Jan 45, pat. appl. 15 Nov 51, pat. grant 25 Nov 54, pub. 13 Jan 55.

DESCRIPTORS: Excavators, *Drive chains, Design, Stresses, Tensile properties, Welded joints, *Metallic belt links.

The invention consists essentially in that a chain link with a cross section uniform over its entire circumference and with a welding spot or welding spots located in the area of one or both sides is provided with a constriction in the middle of its side over the whole circumference thereof, for the purpose of reducing the maximum edge stress and thereby increasing the durability. (Exatract)

Tetel'baum, I., Nazarenko, A., and Chelnokov, N.
ELECTRICAL SIMULATION IN MACHINE BUILDING. 25 Jan 62 [10]p. (1 illus. omitted). JPRS: 12115.
Order from OTS or SLA $1.10 62-15457

Trans. from Ekonomicheskaya Gazeta (USSR) 1961, no. 18, p. 16.

DESCRIPTORS: Simulation, *Machines, *Construction, *Electrical equipment, Computers.

Tsimbalin, V. B.
CONCERNING METHODS OF EXPERIMENTAL EVALUATION AND THE CRITERIA OF QUALITY OF SUSPENSIONS. [1961] 6p. (2 figs. omitted). DSIR NLL M. 3266.
Order from OTS or SLA $1.10 62-15265

Trans. of Avtom[obil'naya] Prom[yshlennost'] (USSR) 1960, no. 7, p. 7-9.

DESCRIPTORS: *Passenger vehicles, Vehicles, *Springs, Vibration isolators, Tests, Test methods.

Witthof, J.
CARBIDE TOOLS FOR SHAPING AND CUTTING. Mar 62.
Order from BISI £5 BISI-1059

Trans. of Draht (West Germany) 1957, v. 8, no. 11, p. 465-470.

DESCRIPTORS: *Carbide tools, *Cutting tools, Tools

Manufacturing Equipment and Processes

Edling, S. G., Kohlstrom, C. V., and Malmquist, A. H.
CONTROL ARRANGEMENT FOR ROLLING MILLS FOR ROLLING STRIPS, PLATES OR THE LIKE, tr. by E. B. F. 30 Jan 62, 12p. (1 fig. Omitted).
Order from OTS or SLA $1.60 62-15763

Trans. of Swedish patent 166,235, cl. 7a:23, by Sandvikens Jernverks AB, appl. 27 May 55, granted 11 Dec 58, pub. 17 Feb 59.

DESCRIPTORS: *Rolling mills, *Control systems, *Metal plates, Servo systems, Computers.

The present invention relates to a control arrangement for rolling mills used in rolling strips, plates or the like, and by which the thickness, hardness and/or the tension of the strip before passage through a pair of rolls can be sensed by means of gauges. The invention is characterized in that, the gauge or gauges are arranged to transmit a signal corresponding to a sensed value, and in that a strip speed measuring device is designed to transmit another signal corresponding to the sensed speed. In this arrangement, one of the mentioned signals is designed to control either the roll adjustment device, or to vary the tension of the strip after a time delay, the length of which is controlled by the other signal. (Extract)

Kheifetz, S. G.
SECUNDAIRE SPANNINGEN, WELKE OPTREDEN BIJ VERMOEIDHEIDSPROEVEN (Secondary Tensions Being Produced at Fatigue Tests). 15p. MTWL: 178. (text in Dutch).
Order from OTS or ETC $1.85 61-17844

Trans. of Zavodskaya Laboratoriya (USSR) 1948, v. 14, p. 742-748.

DESCRIPTORS: *Fatigue (Mechanics), *Tests, Tensiometers.

Hover, H.
THICK SHEET ROLLING MILLS, THEIR DESIGN AND CONSTRUCTION. Feb 62.
Order from BISI £3 15s BISI-2545

Trans. of Blech (West Germany) 1961, v. 8, Mar, p. 179-183.

DESCRIPTORS: *Rolling mills, Design, Construction, *Sheets, Thickness, Production, Industrial plants.

Loeck, K.
DESIGN DETAILS OF A NEW PLATE MILL. Paper 29 [of the] Tech[nische] Be r[ichte of the] Huttenwerk Oberhausen. Feb 62.
Order from BISI £5 15s BISI-2546

Trans. of reprint from Blech (West Germany) 1958, v. 5, Jan, p. 17-23.

DESCRIPTORS: *Rolling mills, Design, *Sheets, Production, Industrial plants.

Lorich, H.
INSTALLATIONS FOR THE MEASUREMENT, REGULATION AND CONTROL OF TOTAL BLAST FLOW AND EQUALIZATION OF BLAST AT THE TUYERES OF BLAST FURNACES. Feb 62.
Order from BISI £4 5s BISI-2450

Trans. of Conti Elektro Berichte [sic] (Germany?) 1961, v. 7, Jan/Mar, p. 23-33.

DESCRIPTORS: *Blast furnaces, Blast, Operation, Measurement, Control, Industrial equipment.

Schulz, Hans Joachim.
ELECTRIC DISCHARGE MACHINING OF TOOLS (Die Werkzeugherstellung mit Funkenerosionsmaschinen). [1962] [37]p. (foreign text included) 13 refs.
Order from SLA $3.60 62-14495

Trans. of Giesserei (West Germany) 1958, v. 45, no. 20, p. 615-623 (Verein Deutscher Giessereifachleute (West Germany). Berichte-5).
Another trans. is available from SLA mi$2.40, ph$3.30 as 61-10645 [1960] 15p.

DESCRIPTORS: *Tools, *Machining, Spark machining, *Electric discharges.

MATERIALS

Beblo, Friedrich.
MAPS PRINTED ON TEXTILES AND SYNTHETIC PAPER. 3 Jan 61 [13]p. 8 refs. JPRS: 6503.
Order from OTS or SLA $1.60 62-19221

Trans. of article from unidentified German-language source, 1960(?) p. 67-75.

DESCRIPTORS: *Maps, Printing, Materials, *Textiles, *Synthetic fibers, *Paper, Tests.

Buck, J. and Winczakiewicz, A.
ELECTRICAL INSULATING PAPERS. [1961] 6p. 4 refs.
Order from SLA $1.10 62-10608

Trans. of Przeglad Papierniczy (Poland) 1959 [v. 15] p. 241-244.
DESCRIPTORS: *Electric insulation, *Paper, Production, Poland.
The types of electrical insulating paper currently being manufactured in Poland are discussed.

Butt, Yu. M. and Berkovich, T. M.
OVER DE INVLOED VAN LUCHTVASTHOUDENDE STOFFEN OP PORTLAND CEMENTBRIJ EN BETON (The Effect of Air Retaining Substances on Cement Mortars and Concretes) 17p. 7 refs. MTWL: 255. (text in Dutch).
Order from OTS or ETC $1.85 61-17890

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 7, p. 653-660.

DESCRIPTORS: *Cements, *Concrete, *Air, Plasticity, Stability, Colloids

Eraldo, Nino and Martinetti, Alfonso.
ARRANGEMENT FOR ELIMINATING ELECTROSTATIC CHARGES FROM ANY MATERIAL CHARGED THEREWITH, PARTICULARLY BUT NOT EXCLUSIVELY SUITABLE FOR DISCHARGING STATIC ELECTRICITY ACCUMULATED IN YARNS OF TEXTILE FIBERS AND IN FABRICS, tr. by J. B. 24 Jan 62, 4p. (1 fig. omitted).
Order from OTS or SLA $1.10 62-15758

Trans. of Italian patent 450,020, cl. 19, appl. 17 Dec 48, granted 7 July 49, printed July 50.

DESCRIPTORS: Fibers, *Textiles, Threads, *Static electricity, Electric discharges, Direct current, *Electrostatics, Static eliminators

The arrangement is characterized in that the material, which enters between drawing elements connected to a high voltage direct current source and insulated electrically from the rest of the machine, passes between plates that are interconnected electrically and equipped with points of suitable length inclined in the direction opposite to the (direction of) movement, and leaves at the other side.

Kukolev, G. V. and Ostapenko, V. D.
PHYSISCH-CHEMISCHE PROCESSEN BIJ DE VERHARDING VAN FERRO-CEMENT (Physico-chemical Processes of Hardening of Ferrocement). 14p. 7 refs. MTWL: 252. (text in Dutch).
Order from OTS or ETC $1.85 61-17892

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1949, v. 22, no. 7, p. 661-666.

DESCRIPTORS: *Cements, Iron compounds, Oxides, Calcium compounds, *Hardening.

Vol'fson, L. G. and Kogan, L. M.
CHLORINATED INSECTICIDES BASED ON HEXACHLOROCYCLOPENTADIENE. 30 Nov 61, 1p. AID rept. 61-160; AD 269 785.
Order from OTS or SLA $1.10 62-15416

Abstract trans. of Khimicheskaya Promyshlennost' (USSR) 1961, no. 10, p. 8-13.

DESCRIPTORS: *Heat resistant polymers, Materials, *Cyclopentenes, Chlorides, Polymers, Synthesis, Chlorination.

This document is more of a critical evaluation of the original article rather than either a translation or an abstract.

Fuels, Lubricants, and Hydraulic Fluids

Baradash, B. V.
UKRAINIAN GAS DESIGN AND PLANNING INSTITUTE. 2 Nov 61 [8]p. 1 ref. JPRS: 10959.
Order from OTS or SLA $1.10 62-13427

Trans. of Gazovaya Promyshlennost' (USSR) 1961 [v. 6] no. 3, p. 26-29.

Portions of this report will not reproduce well.

DESCRIPTORS: *Fuels, Transportation, Pipes, Installation, Design, Economics, Gases, Industry, Industrial plants, Compressors, Gas generating systems.

The designing of gas trunk lines and industrial installations is considered.

Dement'eva, M. I., Rivin, M. A., and Rudkovskii, D. M.
SNELLE OXYDATIEVE VERGASSING VAN BENZINE (High Oxydative Gasification of Gasoline). 28p. 12 refs MTWL: 151. (text in Dutch).
Order from OTS or ETC $2.37 61-17873

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1946, v. 19, [no. 7] p. 632-650.
A trans. in English is available from OTS $1.25 as 60-41321, JPRS-5506, 26 Sep 60, 38p.

DESCRIPTORS: *Gasoline, *Gas generator systems, Oxidation.

Kitaev, B. I.
SURVIVAL OF COMBUSTIBLE COMPONENTS IN THE OXYGEN ZONE. Mar 58 [4]p. MinPower T. 166; [DSIR NLL] M 553.
Order from OTS or SLA $1.10 62-13386

Trans. of mono. Gasification of Solid Fuel, Moscow, 1957, p. 286-290.

DESCRIPTORS: Solids, *Fuels, *Combustion, *Flames, Turbulence, Steam, Decomposition, *Oxygen, *Carbon compounds, *Monoxides, Survival, Blast furnaces, Fuel consumption.

In gasification with steam-oxygen blast, considerable amounts of carbon monoxide are present in the oxygen zone. At temperatures in the range of 1200°, the carbon monoxide is not burnt up but collects at the level of the fuel bed. Investigation of the mechanism of burning in flames shows that a turbulent flame for a given diameter of jet is always considerably longer than a laminar flame, although, undoubtedly, turbulence intensifies combustion. This is explained by the fact that in passing from a laminar to a turbulent regime the gas input increases in proportion to the velocity; the intensity of combustion, however, fails to keep pace with the increase in gas input, i.e. the small volumes of gas which have broken away, burn relatively more slowly. If it were possible at a given velocity to pass from a turbulent to a laminar regime, the laminar flame would be longer than the turbulent flame. Since

with increased velocity, the intensity of combustion fails to keep pace with gas input, then naturally, with increased velocity the survival of combustible components in the oxygen zone will increase.

Oreshko, V. F.
OVER DE "ONTVLAMMINGSTEMPERATUUR" VAN MINERALE KOLEN (Ignition Temperature of Coals) tr, by G. J. M. Fritschy. 6p. 8 refs. MTWL: 361. (text in Dutch).
Order from OTS or ETC $1.55 61-32040

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 71, p. 331-333.

DESCRIPTORS: *Coal, *Ignition, Temperature.

Rudkovskii, D. M., Markovich, V. G., and Kazakova, B. A.
OXYDATIEVE PYROLYSE BIJ HOGE TEMPERATUUR VAN BRANDSTOFFEN ALS TECHNISCHE METHODE TER VERKRIJGING VAN GASVORMIGE OLEFINEN. II. PYROLYSE VAN BRANDSTOFFEN IN TEGENWOORDIGHEID VAN WATERDAMP EN VAN ZUURSTOF (High-temperature Oxidative Pyrolysis of Fuels as Technical Way of Production of Gaseous Olefins. II. Pyrolysis in the Presence of Water Vapor and of Oxygen) 19p. 4 refs. MTWL: 236. (text in Dutch).
Order from OTS or ETC $1.85 61-17910

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1946, v. 19, no. 12, p. 1381-1392.

DESCRIPTORS: Pyrolysis, *Fuels, *Oxidation, *Ethylenes, Gases, Water vapor.

Vinogradov, G. V., Pavlov, V. P., and Klimov, K. I.
MECHANISCHE EIGENSCHAPPEN VAN SMEERVETTEN. I. (Mechanical Properties of Greases. I.). 24p. 65 refs. MTWL: 145. (text in Dutch).
Order from OTS or ETC $1.93 61-17867

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 1, p. 47-58.

DESCRIPTORS: *Greases, Lubricants, Mechanical properties, Physical properties.

Vol'f, M. B. and Zabryanskii, E. I.
KLOPVASTHEID VAN ZUIVERE KOOLWATERSTOFFEN (Knock Resistance of Individual Hydrocarbons) 20p. 9 refs. MTWL: 157. (text in Dutch).
Order from OTS or ETC $1.85 61-17859

Trans. of Neftyanoe Khozyaistvo (USSR) 1947, v. 25, no. 12, p. 35-47.

DESCRIPTORS: *Hydrocarbons, *Knocking, Fuels, Airplane engines.

Photographic Materials

Fridkin, V. M.
CONTRIBUTION TO THE THEORY OF FORMATION OF THE LATENT ELECTROPHOTOGRAPHIC IMAGE. 1961, 18p.
Order from CTT $36.00 CTT-61K122

Trans. of Nauchno-Issledovatel'skii Institut Poligraficheskogo Mashinostroeniya. Sbornik Trudov (USSR) 1959, v. 5, p. 111-135.

DESCRIPTORS: *Electrophotography, Photography, *Photographic film.

Kipriyanov, A. I. and Dyadyusha, G. G.
STERIC HINDRANCE IN MESOPHENYLPYRIDOCARBOCYANINES. 1961, 7p.
Order from CTT $14.00 CTT-61C101

Trans. of Akademiya Nauk URSR [Kiev]. Dopovidi, 1959 [no. 10] p. 1119-1125.

DESCRIPTORS: *Stereochemistry, *Photographic chemicals, Phenyl radicals, *Cyanines.

Krylova, T. N. and Sokolova, R. S.
ACHROMATIC REFLECTION-REDUCING FILMS. 1961, 8p.
Order from CTT $16.00 CTT-61P101

Trans. of Optika i Spektroskopiya (USSR) 1957, v. 2 [no. 2] p. 254-262.

DESCRIPTORS: *Photographic film, Films, Reflection, Reduction, Materials.

Levinos, Steven.
NEW PROCESS FOR PHOTOGRAPHIC PRINTING AND APPARATUS FOR PUTTING IT INTO OPERATION. [1961] 9p.
Order from OTS or SLA $1.10 62-10661

Trans. of French patent 1,245,215, int. cl. G 03 d - G 03c (P.V. no. 815,503) by General Aniline and Film Corp., U.S.A., appl. 13 Jan 60, granted 26 Sep 60 (patent appl. filed U.S.A. 14 Jan 59 under 786,792).

DESCRIPTORS: *Photography, *Printing, Photochemistry, Materials.

A photographic printing process is proposed using a reproduction material made up of a support such as paper or film provided with a coating of inert photochemical material which consists of placing this support in an impermeable chamber under light. To this coating is applied an aqueous activation agent which, in contact with said inert substance forms an actinic reaction product. This activated coating is exposed to light through the translucent original to be reproduced, thus producing a proof image which is fixed by rendering said coating photochemically inert before it emerges from said chamber.

Lukin, B. V.
EEN METHODE VOOR VERKORTING VAN DE BELICHTINGSTIJD BIJ RÖNTGENDIFFRACTIEOPNAMEN (A Method for Shortening the Exposure Time in X-ray Diffraction Photography). 4p. MTWL: 146. (text in Dutch).
Order from OTS or ETC $1.40 61-17868

Trans. of Zavodskaya Laboratoriya (USSR) 1948, v.14, no. 7, p. 883.
DESCRIPTORS: *X-ray diffraction cameras, X-rays, Electron tubes, Exposure.

Ritzerfeld, Wilhelm and Ritzerfeld, Gerhard.
PROCESS FOR INKING AND APPARATUS FOR ACHIEVING PRINTING BY POLYCOPIES. [1961] 20p.
Order from OTS or SLA $1.60 62-10658

Trans. of Belgian patent 600949 [1960] (priority of patent appl. German Federal Republic filed 6 Apr 60, no. R 27 700 IVa. 15k, 21 Apr 60, no. R 27 792 IVa/15k and 25 May 60, no. R 28 032 IVa/15b.)

DESCRIPTORS: *Printing, Materials, Photographic plates, Photographic emulsions, Ink, Ink recorders.

This invention pertains to a process, an inking sheet and an apparatus for achieving printing by polycopy in which there is realized a photographic reproduction on a photosensitive substance whose silver halide emulsion contains a translucent material which may be rendered adhesive, for example the leucobase of a triphenylmethane colorant, and from this substance there is achieved by photography a negative of the original in the hardened gelatin at the points without image of the printing plate. According to the invention, the non hardened gelatin situated at the points of the image of the printing plate is rendered adhesive by the use of an aqueous solution of a compound. Then, by applying a pressure and an addition of heat, the printing plate is placed into contact with the layer side of an inking sheet which is preferably resistant to diffusion. When the printing plate is separated from the inking sheet for polycopy, the colorant layer of the polycopy inking sheet is transferred onto the printing plate at the image points, due to the adherence of the non hardened gelatin, while the hardened portions of gelatin of the printing plate do not have sufficient adherence with respect to the layer of colorant or the layer of tannin of the polycopy inking sheet. (Extract)

Plastics

Berlin, A. A.
SYNTHESIS AND PROPERTIES OF POLYMERS HAVING SYSTEMS OF CONJUGATED BONDS [Sintez i Svoistva Polymerov s Sistemoi Sopryazhennykh Svyazei]. 1961, 13p.
Order from CTT $26.00 CTT-61K118

Trans. of Khimicheskaya Promyshlennost' (USSR) 1960, no. 5, p. 375-382.
Another trans. is available from OTS $0.75 as 61-21636, JPRS-7475, 28 Apr 61, 24p; an abstract trans. from LC or SLA mi$1.80, ph$1.80 as 61-13989, AID-60-81, 7 Nov 60, 1p.

DESCRIPTORS: *Polymers, Electrical properties, Conductivity, Semi-Conductors, Synthesis, Acetylenes, Chemical bonds.

Kartashevskii, N. G., Barkov, G. I. and others.
NEW PLASTIC PACKAGING FOR THE STORAGE OF PRESERVED HOMOTRANSPLANTS. 9 Nov 61 [8]p. 7 refs. JPRS: 10992.
Order from OTS or SLA $1.10 62-13342

Trans. of Vestnik Khirurgii (USSR) 1961 [v. 86] no. 7, p. 112-115.

DESCRIPTORS: *Medical equipment, *Packaging, Storage, *Transplantation, Plastics, *Tissues (Biology).

The presented type of tare made of plastics for the preservation and storage of human tissues has many advantages over glass containers. The plastic tare makes possible long distance shipping of biological preparations, which considerably widens the possibility of carrying out restoration operations under conditions of the peripheral medical institutions. To manufacture soft tare for homotransplants the polyvinyl-chloride film of PM-1 type is recommended, because it is resistant to the effect of various temperatures (from plus 120 to minus 183°). The best method of preparation of plast soft tare for these purposes is the method of high frequency welding which permits, under conditions of mass production, continuous good results in accordance with all technical requirements. Hermetization of a sterile package containing the biopreparation must be accomplished under box conditions by means of a welding device. (Author)

Rubber and Elastomers

Coudert, Joseph.
MULTIPURPOSE SPONGE BODY, tr. by F. H. B. 8 Dec 61, 5p. (10 figs. omitted).
Order from OTS or SLA $1.10 62-13881

Trans. of French patent 1,019,413, gr. 20, cl. 5, appl. 2 June 50, granted 29 Oct 52, pub. 21 Jan 53.

DESCRIPTORS: Detergents, Containers, *Foam rubber, Elasticity.

The body of sponge rubber, or any other material, is characterized in that it has a chamber in which a great variety of materials can be introduced: powders, liquids, pastes or solids according to the texture and structure of the raw material of the sponge rubber body and its composition.

Kuzminskii, A. S., Maizels, M. G., and Lezhnev, N. N.
MECHANISCHE ACTIVERING VAN RUBBER (Mechanical Activation of Rubbers) 9p. 5 refs. MTWL: 413. (text in Dutch).
Order from OTS or ETC $1.55 61-32001

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 71, no. 2, p. 319-322.

DESCRIPTORS: *Rubber, Mechanical properties, *Deformation, Antioxidants, *Oxidation, Reaction kinetics.

Zhukov, I. I., Poddubnyi, I. Ya., and Lebedev, A. V.
PHYSISCH-CHEMISCH ONDERZOEK VAN SYNTHETISCHE RUBBEROPLOSSINGEN. II. MOLECULAIR GEWICHT EN INTRINSIEKE VISCOSITEIT VAN Na-BUTADIEENRUBBER ZONDER ENIGE STRUCTUUR (Physio-chemical Study of Solutions of Synthetic Rubber. II. Molecular Weight and Intrinsic Viscosity of Coreless Na-butadiene Rubber) 23p. 16 refs. MTWL: 376. (text in Dutch).

Trans. of Kolloidnyi Zhurnal (USSR) 1949, v. 11, no. 3 p. 151-162.

DESCRIPTORS: *Synthetic rubber, Physical chemistry, Molecular Weight, Viscosity, *Butadienes.

MATHEMATICS

Belousov, S. L., ed.
TABLES OF NORMALIZED ASSOCIATED LEGENDRE POLYNOMIALS. Mathematical Tables Series v. 18. June 62, app. 380p.
Order from PP $15.00

Trans. of unidentified Russian mono., n.p., n.d.

DESCRIPTORS: *Polynomials, Tables, Mathematics.

Ditkin, V. A. and Prudnikov, A. P.
OPERATIONAL CALCULUS IN TWO VARIABLES AND ITS APPLICATIONS. International Series of Monographs on Pure and Applied Mathematics, Vol. 24. Apr 62, approx. 170p.
Order from PP $8.50

Trans. of [Operatsionnoe Ischislenie po Dvum Peremennym i Ego Prilozheniya, Moscow, 1958, 178p.].

DESCRIPTORS: *Operational calculus, Integral transforms, Functions, Polynomials, Integrals, Differential equations, Special functions, Complex variables, Mathematics, Applied mathematics.

El'sgol'ts, L. E.
CALCULUS OF VARIATIONS. International Series of Monographs on Pure and Applied Mathematics, Vol. 19. 1962, 178p.
Order from Addison-Wesley Publishing Co., Inc., Reading, Mass.

Trans. of an unidentified Russian mono., n.p., n.d.

DESCRIPTORS: Mathematics, *Calculus of variations.

Tumarkin, G. Ts.
CONVERGENCE OF SEQUENCES OF ANALYTICAL AND MEROMORPHIC FUNCTIONS, tr. by B. W. Kuvshinoff. 28 Nov 61, 7p. 7 refs. APL/JHU TG 230-T259.
Order from OTS $0.50 62-11119

Trans. of Akademiya Nauk SSSR. Doklady, 1959, v. 129, no. 2, p. 280-283.

DESCRIPTORS: *Functions, Sequences, Theory.

The criteria is shown for uniform convergence inside a circle $|z| < 1$ of sequences of analytical and meromorphic functions having uniformly bounded characteristics. Data are used on the behavior of the moduli of the functions at the boundary and the distribution of the zeroes of these functions. The theorem is given for the conditions of convergence of boundary values of the sequences of analytical functions.

Computing Devices

Svoboda, A. and others.
MACHINES FOR PROCESSING INFORMATION. V. II. (Stroje na Zpracovani Informaci, Sbornik 2) [1958] 408p. 6 refs. F-TS-10125/V; AD-153 442.
Order from OTS or SLA $22.25 59-12395

Trans. of mono. pub. by the Czechoslovakian Academy of Sciences, Prague, 1954, v. 2.

DESCRIPTORS: *Data processing systems, *Digital computers, Computers, Design, Computer logic, Memory devices, Control systems, Operation, Scheduling, Theory, Numerical analysis, Punched card methods, Equations, Special functions, Functions, Relays, Electronic circuits, Switching circuits, Electrical networks, Synthesis, Czechoslovakia

The purpose of the present volume is to acquaint a wide public with the new results of the investigations in the field for machines for processing information.

It contains the papers of the Collective of the Laboratory for Mathematical Machines and some outside reports. Most of these papers were presented to the Second All-State Working Conference in the House of Science in December 1953 and to the Fifth Working Conference of the Laboratory. The papers can be divided into three groups: (1) descriptions of completed projects of mathematical machines, particularly of the Czechoslovakian automatic computer SAPO, and the logical design of its memories, controls, and operational units; (2) methods for the solution of problems on the Czechoslovakian automatic computer SAPO and on the calculating perforator, which belongs to the new serially-produced Czechoslovakian machines for punched cards; and (3) papers of the theoretical department (synthesis of relay circuits, synthesis of joint mechanisms, synthesis of 2n poles), and of the physical-technical department (electronic computing circuits, electromagnetic relays). (Author)

Szabo, Imre.
HUNGARIAN PNEUMATIC ANALOGUE SYSTEM COMPUTER UNIT. 27 June 61 [15]p. JPRS: 4729.
Order from OTS or SLA $1.60 62-19200

Trans. of Meres es Automatika (Hungary) 1961, v. 9, no. 2, p. 57-61.

DESCRIPTORS: *Computers, *Analog computers, Analog systems, Pneumatic systems Control systems.

The usual composition of the pneumatic control circuits which are used during the solution of the simpler problems concerning regulation and control are described. (Author)

MECHANICS

NEWS OF THE INSTITUTES OF HIGHER LEARNING, INSTRUMENT MANUFACTURE, 1961, NO. 4: SELECTED ARTICLES. 21 Nov 61 [39]p. 8 refs. FTD-TT-61-161; AD-267 703.
Order from OTS or SLA $3.60 62-15194

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Priborostroenie (USSR) 1961 [v. 4] no. 4, p. 48-70.

DESCRIPTORS: *Gyroscopes, Dynamics, Rotation, Inertia, *Compasses, Vibration, Experimental data, Theory, *Servo motors, Moments, Aerodynamics, *Electric motors, Contilever beams

Contents:
The center of impact of heavy gyroscopes, by V. A. Chikin
The influence of cantilever vibration on the reading of two-stage gyro-compass, by P. A. Il'in and M. A. Sergeev
The calculation of the aerodynamic resistance of a gyro-motor, by A. G. Bessonov

Bagdasaryan, Zh. E. and Gnuni, V. Ts.
RESONANCE IN FORCED NONLINEAR OSCILLATIONS OF LAMINAR ANISOTROPIC SHELLS. 23 Jan 62 [12]p. 9 refs. FTD-TT-61-313; AD-270785. Order from OTS or SLA $1.60 62-15828

Unedited rough draft trans. of Akademiya Nauk Armyanskoi SSR, Erevan. Izvestiya. Seriya Fiziko-Matematicheskikh Nauk, 1961 [v. 14] no. 1, p. 41-49.

DESCRIPTORS: *Sandwich construction, *Hemispherical shells, *Elastic shells, Oscillation, *Nonlinear systems, Rotation, Elasticity, Theory, Stresses, Deformation, Loading, Damping, Gravity, Differential equations.

Two classes of laminar orthotropic shells are examined: sloping shells with double curvature and sloping rotational shells having a closed vertex.

The nonlinearity of the oscillations results in the appearance of an essentially new types of resonance, i.e., resonance at overtones and multiples of the natural oscillation frequency. These resonances have a self-oscillatory nature and differ essentially from parametrically excited oscillations, although they are generated at the same frequencies. Possible values are obtained for the amplitudes of sustained oscillations in 3 ranges of instability.

Berezin, O. A.
THE MOTION OF A CONDUCTING GAS IN A MAGNETOGASDYNAMIC GENERATOR. 23 Oct 61 [17]p. 6 refs. FTD-TT-61-104; AD-265 812. Order from OTS or SLA $1.60 62-13058

Trans. of [Leningrad U. Vestnik] (USSR) 1960 [v. 15] no. 13, Seriya Matematiki, Mekhaniki i Astronomii, no. 3, p. 93-102.

DESCRIPTORS: *Magnetohydrodynamics, Mathematical analysis, Differential equations, *Gases, Motion, Gas generating systems, Thermal conductivity.

We examine two-dimensional stationary motion of a nonviscous and thermally nonconductive, conducting gas from a stationary source. We assume that at sufficiently long times the diagram of the motion of a conducting gas in a magnetogasdynamic generator differs little from the equilibrated one. All unknown hydrodynamic and magnetic values are independent of time. The problem is solved by the "small parameter" method. (Author)

Besekerskii, V. A. and Solov'ev, V. V.
ON THE DYNAMICS OF A GYRO-STABILIZER, CORRECTED BY A DIGITAL COMPUTER. 17 Nov 61 [17]p. 5 refs. FTD-TT-61-130; AD-267 729. Order from OTS or SLA $1.60 62-15198

Unedited rough draft trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Energetika i Avtomatika, 1960, no. 6, p. 113-122.

DESCRIPTORS: *Gyro stabilizers, Dynamics, Corrections, *Digital computers, Computers, Operation, Oscillation, Functions, Transformations (Mathematics), Frequency, Amplifiers

On the basis of Z-transformation, analytic expressions describing the dynamics of a gyrostabilizer corrected by a digital computer, were obtained taking into account nutation oscillation. In the general form, equations for the evaluation of a permissible amplification factor of the system at a given spacing of computer data output were obtained. The effect of a constant lag upon the dynamics of the system due to the insertion of a computer was shown. (Author)

Brcic, Vlatko.
DEVELOPMENT OF MECHANICS IN YUGOSLAVIA 1954-59 (Razvoj Mehanike u Jugoslaviji u Vremenu od 1954-1959 Godine). 1 May 61 [14]p. JPRS: 9153. Order from OTS or SLA $1.60 62-19344

Trans. of Tehnika (Yugoslavia) 1960, v. 15, no. 3, p. 394-397.

DESCRIPTORS: Literature, *Mechanics, Applied mechanics, *Yugoslavia, Elasticity, Plasticity, Membranes, Theory, Aerodynamics, Hydrodynamics, Hydraulics, Geology, Structures, Dynamics, Ships, Construction, Numerical methods and procedures.

Efros, D. A.
GELIJKVORMIGHEID BIJ STROMING VAN GAS-VLOEISTOF-MENGSELS IN EEN POREUS MEDIUM (Conformity in Streaming of Gas-liquid-mixtures in a Porous Medium). 7p. 5 refs. MTWL: 323 (text in Dutch) Order from OTS or ETC $1.55 61-17937

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 69, no. 5, p. 623-625.

DESCRIPTORS: *Porous materials, Gas flow, Liquids, *Hydraulic fluid filters, Theory.

Gorodetskaya, A.
DE STIJGSNELHEID VAN GASBELLEN IN WATER EN IN WATERIGE OPLOSSINGEN BIJ HOGE REIJNOLDS-GETALLEN (The Rate of Rising of Bubbles in Water and Aqueous Solutions at Great Reijnolds-numbers) tr. by G. J. M. Fritschy and P. J. Hoftijzer. 10p. 10 refs. MTWL: 245. (text in Dutch). Order from OTS or ETC $1.55 61-17895

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1949, v. 23, p. 71-77.

DESCRIPTORS: *Gas flow, *Bubbles, Reynolds number, Velocity.

Gubanov, A. I.
DE MECHANICA VAN ELASTISCH-VISKEUSE-PLASTISCHE LICHAMEN. III. TORSIE VAN EEN CYLINDER. (Mechanics of Elastic-viscous-plastic Bodies. III. Torsion of a Cylinder). 17p. 3 refs. MTWL: 260. (text in Dutch).
Order from OTS or ETC $1.85 61-17888

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1949, v. 19, no. 7, p. 773-781.
A trans. in English is available from Science Museum Library, London as 50/3021 (apply to UKSM, Washington, D. C.).

DESCRIPTORS: *Plastics, Elasticity, Viscosity, *Mechanics, Theory.

Gubanov, A. I.
DE MECHANICA VAN ELASTISCH-VISKEUS-PLASTISCHE LICHAMEN. IV. REK EN CONTRACTIE VAN EEN PRISMA (Mechanics of Elastic-viscous Plastic Bodies. IV. Elasticity and Contraction of a Prism) 37p. 4 refs. MTWL: 259. (text in Dutch).
Order from OTS or ETC $2.59 61-17887

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1949, v. 19, no. 8, p. 892-910.

DESCRIPTORS: *Plastics, Elasticity, Viscosity, *Mechanics, Theory.

Kulikov, N. K.
A METHOD FOR THE INVESTIGATION OF STEADY FORCED OSCILLATIONS OF NONLINEAR SYSTEMS WITH ONE DEGREE OF FREEDOM (Ob Odnom Metode Issledovaniya Ustanovivshikhsya Vynuzhdennykh Kolebanii Nelineinykh Sistem s Odnoi Stepen'yu Svobody) tr. by A. Pingell. 1962, 22p. 5 refs. NRL Trans. no. 877.
Order from OTS $0.75 62-11167

Trans. of Akademiya Nauk SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izvestiya: Mekhanika i Mashinostroenie, 1959, no. 1, p. 22-33.

DESCRIPTORS: *Nonlinear systems, Oscillation, Frequency, Amplitude modulation, Motion, Numerical analysis, Non-linear differential equations, Functions, Harmonic oscillators

The existing methods for solving nonlinear differential equations give us for periodic motion in the first approximation a simple harmonic oscillation. In the present paper the study is made of oscillations with a nonlinear regenerative force in the form of: a cubic parabola, an exponential, a sinusoidal function or a graph. (Author)

Langenbakh, A.
CERTAIN NONLINEAR OPERATORS OF THE ELASTICITY THEORY IN HILBERT SPACE. 22 Jan 62 [21]p. 5 refs. FTD-TT-61-316; AD-270 795.
Order from OTS or SLA $2.60 62-15826

Unedited rough draft trans. of Leningrad U. Vestnik (USSR) 1961 [v. 16, no. 1] Seriya Matematiki, Mekhanika i Astronomii, no. 1, p. 38-50.

DESCRIPTORS: *Elasticity, Stresses, Theory, *Functional analysis, *Topology, Functions, Operators (Mathematics) Plasticity, Shear stresses, Materials, Metals, Configuration, Torsion bars, Differential equations, Inequalities.

The variation method is used to prove the existence and uniqueness of a certain generalized solution of two-dimensional problems in the theory of elastoplastic strains. (See also 59-22404, 60-13819)

Levich, V. G.
DE BEWEGING VAN GASBELLEN BIJ HOGE REIJNOLDS-GETALLEN (Motion of Bubbles at Great Reijnolds-numbers) tr. by G. J. M. Fritschy. 14p. 12 refs. MTWL: 247. (text in Dutch).
Order from OTS or ETC $1.85 61-17897

Trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1949, v. 19, p. 18-24.
Unedited trans. in English is available from OTS or SLA $1.10 as 62-13138, NLL M. 4291, Sep 60, 8p.

DESCRIPTORS: *Gas flow, *Bubbles, Reynolds number.

Ponomarev, K. K.
COMPUTATION OF ELASTIC SYSTEMS BY THE METHOD OF CONTINUATION. [1962] 14p. 5 refs. Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of Moscow U. Vestnik (USSR) 1959 [v. 14] no. 6, p. 12-36.

DESCRIPTORS: Beams, Rods, *Structures, *Elasticity, Stresses, Deformation, Numerical methods and procedures, Matrix algebra, Differential equations, Statics, Deflection.

Shchelkachev, V. N.
ANALYSIS OF THE PARAMETERS OF SIMILARITY OF FLOW. 11p. 7 refs. MTWL: 301.
Order from OTS or ETC $1.55 61-17955

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, v. 26, no. 1, p. 24-29.

DESCRIPTORS: *Fluid flow, *Reynolds number, Analog systems.

Shorr, B. F.
CALCULATION OF NONUNIFORMLY HEATED CYLINDERS IN THE ELASTOPLASTIC REGION. 1 Dec 61[13]p. 6 refs. FTD-TT-61-129; AD-268 062.
Order from OTS or SLA $1.60 62-15162

Unedited rough draft trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1960, no. 6, p. 57-62.

DESCRIPTORS: *Cylindrical bodies, Heat, *Plasticity, *Deformation, Temperature, Material, Stresses, Mechanical properties, Physical properties, Tensor analysis, Volume, *Elasticity, Operators (Mathematics), Equations, Integration

Within the scope of the theory of small elastoplastic deformations (Priklad. Mat. i Mekh. 15: 765-770, 1951; available in translation from ATS as ATS-77L35R) two methods are given for solving the problem of thermoplasticity, taking work-hardening and compressibility into account: i.e., the method of "elastic" solutions (using the operators of complementary stresses) and the method of "plastic" solutions, on the basis of which are examined the elastoplastic state of thick-walled cylinders in the presence of axisymmetric stress and heating with an arbitrary radial distribution of the temperature and physicomechanical properties of the material. (Author)

Sveklo, V. A.
VLAKKE GOLVEN EN RAYLEIGH-GOLVEN IN EEN ANISOTROOP MEDIUM (Plain Waves and Rayleigh Waves in an Anistrope Medium) tr. by G. J. M. Fritschy. 8p. MTWL: 309. (text in Dutch).
Order from OTS or ETC $1.55 61-17963

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 59, p. 871-874.

DESCRIPTORS: Elasticity, *Reflection, *Vibration.

Tymowski, Janusz.
ORGANIZATIONAL CHANGES IN THE MECHANICAL DEPARTMENTS OF THE WARSAW, POLAND POLYTECHNIC INSTITUTION. 21 July 61 [8]p. JPRS: 8595.
Order from OTS or SLA $1.10 62-19315

Trans. of Przeglad Mechaniczny (Poland) 1961, v. 20, no. 9, p. 286-288.

DESCRIPTORS: *Universities, Education, *Poland, *Mechanics, Mechanical engineering, Personnel, Training.

Aerodynamics and Pneumatics

Chernyi, G. G.
HYPERSONIC FLOW PAST AN AIRFOIL WITH A SLIGHTLY BLUNTED LEADING EDGE. [1961] 5p. 9 refs. MDF C-112.
Order from OTS or SLA $1.10 62-23229

Trans. of A[kademiya] N[auk] SSSR. Doklady, 1957, v. 114, no. 4, p. 721-724.

DESCRIPTORS: *Hypersonic flow, Supersonic flow, *Blunt bodies, Bodies of revolution, *Airfoils

Kocho, V. S.
DE AARD DER VERANDERING VAN DE TOESTAND VAN EEN GAS IN GASBELLEN, DIE IN EEN VLOEISTOF OPSTIJGEN (The Nature of the Change of the State of a Gas in Bubbles, Rising in a Liquid) tr. by G. J. M. Fritschy. 5p. 2 refs. MTWL: 302. (text in Dutch).
Order from OTS or ETC $1.55 61-17956

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 66, p. 605-607.

DESCRIPTORS: Liquids, *Gases, *Bubbles, Aerodynamics.

Hydrodynamics, Hydraulics, and Hydrostatics

CAVITATION PROBLEMS: TRANSLATION OF THREE RUSSIAN PAPERS, tr. by Gerta Cohen and Hirsh Cohen. 3 Apr 59 [28]p. 15 refs. RPI Math Trans. no. 3.
Order from OTS or SLA $2.60 59-14913

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1952, v. 16, no. 1, p. 116-[118]; #1958, v. 22, no. 4, p. 565-568; Akademiya Nauk SSSR. Doklady, 1956, v. 111, no. 2, p. 312-[315].
Each article is available separately elsewhere.

DESCRIPTORS: *Cavitation, Fluid flow, Sheets, Hydrodynamics, Impact shock, Subsonic flow, Mathematical analysis.

Contents:
The impact on a lamina with discontinuous streamline flow, by M. I. Gurevich
On the impulsive reaction on a lattice of plates with symmetric cavity flow, by S. I. Parchomovskii
On free streamline flow at subsonic velocities about an infinite lattice of flat plates, by G. A. Dombrovskii.

Aronov, I. Z.
AN INCREASE OF THE CRITICAL REYNOLDS NUMBER DURING MOTION OF A FLUID IN BENT TUBES. 23 Jan 62 [10]p. 5 refs. FTD-TT-61-278; AD-270 764. AD-270 764
Order from OTS or SLA $1.10 62-15825

Unedited rough draft trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Energetika (USSR) 1960 [v. 3] no. 4, p. 127-132.

DESCRIPTORS: *Hilsch tubes, Pipes, Fluid flow, Reynolds number, Motion, Turbulent flow, Theory, Mathematical analysis, Brass tubing, Rubber hose, Coils, Hydraulic research.

Experiments were performed to study the motion of water in brass coils and rubber pressure hoses of different diameters and radii of curvature at Reynolds numbers of 300-23,000. The transition from a laminar regime to turbulent in bent tubes occurs at higher Reynolds numbers than in straight tubes. In the presence of a stabilized flow in bent tubes, the value of the critical Reynolds number is determined by the relative radius of curvature R/d. The experiments for investigating hydraulic resistance in coils in the presence of an isothermal motion

of water and the generalization of the data available in the literature made it possible to obtain the values of the critical Reynolds numbers for bent tubes in a wide range of radii of curvature, including very small radii.

Kapitsa, P. L.
THE WAVY FLOW OF THIN FILMS OF VISCOUS LIQUIDS. I. FREE FLOW (Volnovoe Techenie Tonkikh Sloev Vyazkoi Zhidkosti. I. Svobodnoe Techenie). Sep 60, 15p. 4 refs. [DSIR NLL] M 4296.
Order from OTS or SLA $1.60 62-13142

Unedited trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1948, v. 18, p. 3-18. Other translations are available from OTS or SLA $2.60 in 61-23317; DSIR LLU M. 2751 [1961] 23p.; $1.60 in 61-27621, DSIR LLU M. 3249; also available from INSDOC as T. 832 (a).

For abstract see Technical Translations 6: 691, 1961.

DESCRIPTORS: Liquids, Viscosity, *Fluid flow, Wave transmission.

Kazakevich, F. P.
THE EFFECT OF ROUGHNESS ON THE AERODYNAMIC RESISTANCE OF PIPE BUNDLES SUBJECTED TO A TRANSVERSE GAS FLOW. 15 Nov 61 [10]p. 7 refs. FTD-TT-61-87. AD-267 727.
Order from OTS or SLA $1.10 62-15174

Unedited rough draft trans. of Teploenergetika (USSR) 1961 [v. 8] no. 1, p. 56-58.

DESCRIPTORS: *Gas flow, *Pipes, Surfaces, Milling machines, Turbulence, Boundary layer, *Hydrodynamics.

The experimental results corroborate the opinion that in the case of turbulent motion the roughness begins to take effect, as soon as the thickness of the boundary layer becomes comparable to the height of the individual protuberances.

METALLURGY

Gertsriken, S. D. and Dekhtyar, I. Ya.
DIFFUSIECONSTANTEN (Diffusion-coefficients) tr. by J. H. van Santen. 10p. 9 refs. MTWL: 180. (text in Dutch).
Order from OTS or ETC $1.55 61-17846

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1947, v. 17, p. 871-880.

DESCRIPTORS: *Diffusion, *Alloys, Theory.

Gottardi and Toso, O.
STATISTICAL QUALITY CONTROL IN THE PRODUCTION OF HEAVY FORGINGS. Feb 62.
Order from BISI £4 5s BISI-2515

Trans. of paper presented at the Conference on Heavy Forging, Terni, Sep 61.
DESCRIPTORS: *Forging, *Castings, *Quality control.

Hartung, W.
EXPERIENCE WITH DIRECT-READING SPECTRO-ANALYSIS IN THE GRAY-IRON FOUNDRY. Feb 62, 5200 words.
Order from HB $12.50 HB-5344

Trans. of Giesserei (West Germany) 1961, v. 48, no. 19, p. 579-586.

DESCRIPTORS: *Cast iron, Iron, *Spectrographic analysis, *Silicon

Kasatkin, B. S., Kareta, N. L., and Darovskii, G.F.
TEXTURE FINE ET SON INFLUENCE SUR LA RÉSILIENCE DES JOINTS DE SOUDURE [Fine Structure (Granular and Sub-Granular) and Its Influence on the Impact Strength of Welds] tr. by Lopukhine. 10 Oct 60 [30]p. 12 refs. CEA Trans. no. R 536 (text in French).
Order from OTS or SLA $2.60 61-15776

Trans. in French of Avtomat[icheskaya] Svarka (USSR) 1958 [v. 11] no. 2, p. 20-29.
A trans. in English is available from LC or SLA mi$2.40, ph$3.30 as 59-22657; BWRA TR-13/59, Mar 59 [16]p.

DESCRIPTORS: *Welds, Mechanical properties, Microstructure.

Klychnikov, S. I.
THE FORGING AND PRESSING OF CAST IRON. Feb 62.
Order from BISI £3 15s BISI-2530

Trans. of Kuznechno-Shtampov[ochnoe Proizvodstvo] (USSR) 1961, v. 3, Mar, p. 19-23.

DESCRIPTORS: *Cast iron, *Forging

Moshnin, E. N. and Zolotukhin, N. M.
A MORE ACCURATE METHOD OF DETERMINING THE UPSETTING FORCE FOR FORGING INGOTS. Feb 62.
Order from BISI £1 5s BISI-2529

Trans. of Kuznechno-Shtampov[ochnoe Proizvodstvo] (USSR) 1961, v. 3, Mar, p. 18-19.

DESCRIPTORS: *Castings, *Forging.

Osipov, V. G.
VERBAND TUSSEN REK EN AFSCHUIVING BIJ VERSCHILLENDE SOORTEN VAN DEFORMATIE (Connection between Elasticity and Shear at Different Sorts of Deformation). 10p. 4 refs. MTWL: 264. (text in Dutch)
Order from OTS or ETC $1.55 61-17877

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, p. 580-583. (no. 5)

DESCRIPTORS: *Metals, Elasticity, Shear stresses, *Deformation.

Picasso, G.
DIRECT SPECTROPHOTOMETRIC ANALYSIS OF ALUMINUM IN STEEL. Feb 62.
Order from BISI £2 10s BISI-2527

Trans. of [la] Met[allurgia] Ital[iana] 1961, v. 53, May, p. 269-273 and 276.

DESCRIPTORS: *Steel, *Spectrographic analysis, *Aluminum, Spectrophotometers

Postnikov, V. S.
INTERNAL FRICTION AND SHEAR MODULUS OF PURE COPPER AND BERYLLIUM BRONZE. 6p. 6 refs. NSF-tr-86. MTWL-643.
Order from OTS or ETC $1.55 62-26015

Trans. of Akademiya Nauk SSSR. Doklady, 1953, v. 91, p. 79-82.
Another trans. is available from SLA as RT-213.

DESCRIPTORS: *Copper, *Beryllium alloys, Bronze, *Friction, *Shear stresses.

Rodionov, Yu. I. and Sukhanov, G. I.
DEVICE FOR CONTINUOUS ANNEALING OF WIRE. Feb 62.
Order from HB $2.00 HB-5456

Trans. of Russian patent 110, 587, Feb 57.

DESCRIPTORS: *Wire, Heat treatment.

Rossi, G. and Vianello, L.
PRODUCTION OF GEAR RIM BLANKS OF HIGH HARDNESS FROM AIR-HARDENING STEEL. Mar 62.
Order from BISI £4 BISI-2524

Trans. of paper presented at the Conference on Heavy Forging, Terni, Sep 61.

DESCRIPTORS: *Gears, Materials, Hardness, *Steel, Nickel, Chromium, Molybdenum, Forging, Heat treatment

Samsonov, G. V.
SILICIDES AND THEIR USES IN ENGINEERING. 29 Jan 62 [275]p. 479 refs. FTD-TT-61-409; AD-271 811.
Order from OTS or SLA $17.50 62-19634

Unedited rough draft trans. of mono. Silitsidy i Ikh Ispol'zovanie v Tekhnike, Kiev, 1959, 204p.

DESCRIPTORS: *Silicides, Silicon alloys, Silicon compounds, Silicon, Crystal structure, Physical properties, Chemical properties, Magnetic properties, Mechanical properties, Thermodynamics, Superconductivity, Thermochemistry, Metallic compounds, Alloys, Metals, Alkaline earth metals, Alkaline earths, Alkali metal alloys, Transition elements, Boron compounds, Borides, Carbon compounds, Carbides, Nitrogen compounds, Nitrides, Textbooks, Gas turbines, Rocket motors, Nuclear power plants.

Contents:
Structures and physicochemical properties of silicides
Methods of preparing silicides
Silicides of metals of group I of the periodic system
Silicides of metals of group II of the periodic system
Silicides of the transition metals
Silicides of elements of the boron subgroup
Silicides of elements of the carbon subgroup
Silicides of elements of the nitrogen subgroup and other silicides
Multicomponent alloys of the silicides
Brief analytical-chemical characterization of the silicides
Utilization of silicides in engineering

Tarnovskii, I. Y., Pozdeev, A. A., and Meandrov, L. V.
PHYSICAL EQUATIONS OF THE MECHANICS OF BODIES UNDERGOING DEFORMATION IN THE THEORY OF PLASTIC WORKING OF METALS. Mar 62.
Order from BISI £4 5s BISI-2557

Trans. of Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Chernaya Metallurgiya (USSR) 1961, no, 4, p. 67-78.

DESCRIPTORS: *Metals, *Deformation, Plasticity, Equations.

Ferrous Metals

EXPERIENCE IN THE SAMPLING OF LIQUID STEEL WITH THE VACUUM PIPETTE FROM THE FURNACE AND INGOT MOLD: GENERAL DISCUSSION OF A PAPER BY H. SCHENCK, H. TAXHET AND K. G. SCHMITZ. Feb 62.
Order from HB $8.65 HB-5465

Trans. of Stahl and Eisen (West Germany) 1961, v. 81, no. 23, p. 1647-1649.
Also available from HB $9.75 in HB-5426, Dec 61, 3400 words.

DESCRIPTORS: Sampling, *Liquid metals, *Steel, Vacuum apparatus, Pipettes, Electric furnaces, Silicon compounds, Dioxides, Gases

Amstutz.
STUDY OF STEEL SAMPLING FOR CHEMICAL AND SPECTROGRAPHIC ANALYSIS. Feb 62.
Order from BISI £4 15s BISI-2645

Trans. of Centre [de] Doc[umentation] Sider[urgique]. Circ[ulaire d'Informations Techniques] (France) 1961 [v. 18] no. 7/8, p. 1777-1789.

DESCRIPTORS: *Steel, Sampling, *Spectrographic analysis.

Asnis, A. E. and Medovar, B. I.
INVLOED VAN DE MICROSTRUCTUUR AAN HET KERFOPPERVLAK OP DE KERFSLAGWAARDE VAN DE BEPROEFDE DOORSNEDE (Action of Microstructure of the Notch Surface on the Notch Shock of the Tested Section). 5p. 5 refs. MTWL: 262. (text in Dutch).
Order from OTS or ETC $1.40 61-17875

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, no. 9, p. 1102-1103.

DESCRIPTORS: *Welded joints, Steel, Tests, *Fracture, Brittle materials.

Maksimov, S. K.
INVLOED VAN HET TECHNOLOGISCHE BEWERKINGS PROCES VAN DE KERF OP DE KERFSLAGWAARDE (The Action of the Technological Working Process of the Notch on the Notch Shock). 9p. 6 refs. MTWL: 263 (text in Dutch).
Order from OTS or ETC $1.55 61-17876

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, no. 8, p. 967-871 [sic]

DESCRIPTORS: *Steel, Tests, *Fracture, Brittle materials.

Mett, B. and Entin, R. I.
DE OORZAKEN VAN DE INVLOED VAN MOLYBDEEN OP DE KINETICA VAN DE ISOTHERME ONTLEDING VAN AUSTENIET (Influence of Molybdenum on the Kinetics of Isothermal Decomposition of Austenite) tr. by J. H. van Santen. 10p. (foreign text included) 6 refs. MTWL: 295. (text in Dutch).
Order from OTS or ETC $1.55 61-17969

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 4, p. 681-684.

DESCRIPTORS: *Austenite, Pyrolysis, *Molybdenum, Iron alloys, *Decomposition, Kinetic theory.

Oleinikov, A. P. and Taganov, K. I.
SPECTROCHEMISCHE METHODE VOOR DE QUANTITATIEVE BEPALING VAN KOOLSTOF IN STAALSOORTEN (Spectrographic Method for the Determination of Carbon in Steels) tr. by J. H. van Santen. 6p. MTWL: 298. (text in Dutch).
Order from OTS or ETC $1.55 61-17972

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15; no. 1, p. 59-62.

DESCRIPTORS: *Steel, *Carbon, Determination, *Spectrographic analysis.

Witte, G. de.
THE QUALITY ASSESSMENT OF ROLLED THIN AND THICK OXYGEN-STEEL PLATE. Mar 62.
Order from BISI £5 5s BISI-2547

Trans. of Metalen (Netherlands) 1961, v. 16, 28 Feb, p. 56-63.

DESCRIPTORS: *Steel, Metal plates, *Rolling mills.

Krotov, I. V. and Khachadurova, T. M.
NIEUWE METHODE TER BEPALING VAN DE DIKTE VAN NATUURLIJKE PASSIVERENDE LAGEN OP METALEN (Determination the Thickness of Natural Passivating Films on Metals). 11p. 5 refs. MTWL: 382. (text in Dutch).
Order from OTS or ETC $1.55 61-32020

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1948, no. 1, p. 50-56.

DESCRIPTORS: *Metals, Surfaces, Films, *Corrosion inhibition, Measurement.

Nikolaevskii, V. N.
THE AVERAGE SIMILARITY OF MICROSTRUCTURES OF PORE SPACES (O Podobii v Srednem Mikrostruktur Porovykh Prostranstv). Dec 61 [11]p. 17 refs. RTS 1972.
Order from OTS or SLA $1.60 62-13743

Trans. of A[kademiya] N[auk] SSSR. Otd[elenie Tekhnicheskikh Nauk]. Izv[estiya]: Mekhanika i Mashinostroenie, 1960, no. 4, p. 41-47.
Another trans. is available from ATS $14.95 as ATS-87M47R [1961] 8p.

DESCRIPTORS: *Porous metals, Microstructure, Porosity.

The important factors subject to measurement in problems of the motion of a liquid and a gas in porous media include the average flow characteristics, the average being taken over the totality of points in the pore space of the medium. Among examples of such characteristics are the rate of filtration, the porosity and permeability of the medium, the mean pressure as measured by a piezometer etc. When simulating flows in porous media, particularly those of liquid-gas mixtures, the requirements of similarity of the geometry must be satisfied for the microstructures of pore spaces. The problem then arises of how to select those parameters that play a decisive part for the average flow characteristics. Certain average characteristics are presented as examples in the present paper, using the results of previous investigations into the remixing of a homogeneous liquid in porous media. (Author)

Pridantsev, M. V. and Litvinenko, D. A.
THE EFFECT OF PHOSPHORUS ON SOME PROPERTIES OF AUSTENITIC CHROMIUM-NICKEL STEEL. [1961] [14]p. (6 figs. omitted) 17 refs. [DSIR NLL] M. 3223.
Order from OTS or SLA $1.60 61-27627

Trans. of Tsentr[al'nyi] Nauch[no-]Issled[ovatel'skii] Inst[itut] Chernoi Met[allurgii]. Inst[itut] Stali Sbornik Trudov (USSR) 1960, v. 17, p. 386-397.

DESCRIPTORS: *Steel, *Phosphorus, *Thermal stresses, Austenite, Chromium alloys, Nickel alloys, Dispersion hardening.

increasing the phosphorus content to about 0.4% has practically no effect on the ductility of chromium-nickel austenitic steel Kh25N20 in hot-working. The ductility of this steel drops sharply only at a phosphorus content of about 0.6%. The presence of phosphorus in an amount of about 0.4% gives rise to the phenomenon of dispersion hardening in steel Kh25N20 after quenching and subsequent tempering in the temperature range 600-850°C. The softening temperature of the steel with 0.4% P lies above 750°C. The phenomenon of dispersion hardening in steel Kh25N20 is linked with the precipitation from the solid solution of a second, phosphorus-containing phase, which is apparently a solid solution of the phosphides of iron, nickel and chromium. Phosphorus can be employed as an alloying element for improving the creep-resisting properties of alloys, in particular those of chromium-nickel austenitic steel Kh25N20. The alloying of steel Kh25N20 with about 0.4% phosphorus substantially improves the stress-rupture properties of this steel at high temperature stresses. (Author)

Romanov, V. V.
STRESS-CORROSION CRACKING OF METALS, tr. tr. by Ch. Nissenbaum. 1961, 151p. 160 refs. PL-480 Comm.
Order from OTS $1.50 60-51084

Trans. of mono. Korrozionnoe Rastreskivanie Metallov, Moscow, 1960 [260p.].

DESCRIPTORS: *Metals, *Fracture (Mechanics), *Corrosion, *Stresses, Polarization, Alloys, Impurities, Corrosion inhibition, Corrosion research.

Contents:
The influence of polarization on stress-corrosion cracking of metals
Theories of the mechanism of stress-corrosion cracking of metals
Influence of stresses during stress-corrosion cracking of metals
Methods of investigation of stress-corrosion cracking of metals
Influence of alloying elements and impurities on stress-corrosion cracking of metals
The influence of corrosive environments on stress-corrosion cracking of metals
The influence of certain factors on stress-corrosion cracking of metals
Protection of metal against stress-corrosion cracking

Tomashov, N. D., Kiselev, V. S., and Gol'berg, M. M.
DE CORROSIE VAN METALEN ONDER EEN VERNISLAAGJE EN DE ELECTROCHEMISCHE ONDERZOEKINGSMETHODEN VAN DE BESCHERMENDE EIGENSCHAPPEN VAN DE VERNIS DEKLAGEN (The Corrosion of Metals under Films of Paint and the Electrochemical Research Methods of the Protective Properties of Paint Coatings) 19p. MTWL: 281. (text in Dutch).
Order from OTS or ETC $1.85 61-17981

Trans. of Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1949, no. 2, p. 152-163.

DESCRIPTORS: *Metals, *Corrosion, Paints, Electrochemistry, Analysis.

Uzhik, G. V.
EEN NIEUW KRITERIUM VOOR DE BROSHEID EN DE PLASTICITEIT VAN METALEN (A New Criterion for the Brittleness and the Plasticity of Metals) 7p. 4 refs. MTWL: 293. (text in Dutch).
Order from OTS or ETC $1.55 61-17967

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 68, no. 6, p. 1037-1039.
A trans. in English is available from HB as HB-2907.

DESCRIPTORS: *Metals, *Brittle materials, *Plasticity, Stability.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

ACTIVITIES OF CZECHOSLOVAK SCIENTISTS AT THE JOINT INSTITUTE FOR NUCLEAR RESEARCH IN DUBNA, USSR. 12 May 61 [5]p. JPRS: 4599.
Order from OTS or SLA $1.10 62-19303

Trans. from Predvoj (Czechoslovakia) 1961, v. 5, no. 7.

DESCRIPTORS: *Nuclear physics, Scientific personnel.

Some of the projects in which Czechoslovak scientists participate, and which are briefly described in non-technical or popular language, include: (1) developement of a technique for measuring billionths of a second, (2) search for a source for antiprotons, which are free from other particles, (3) the formulation of laws governing the reactions that elementary particles undergo, (4) the structure of the nuclei, (5) bubble chamber investigations, (6) the identification of "strange" particles, and (7) the preparation of heavy transuranium elements by bombardment of heavy uranium nuclei with particles heavier than helium.

NUCLEAR SCIENCE, NOV 55-SEP 60: ARTICLE TITLES. 18 Sep 61 [22]p. JPRS: 10173.
Order from OTS or SLA $2.60 62-19696

Trans. of article titles from Ho Tzu K'o Hsüeh (Chinese People's Republic) 1955-60.

DESCRIPTORS: *Nuclear physics, Bibliography.

RADIOCHEMISTRY, 1960, VOL. 2, NOS. 1-2. 1962, 283p. PL 480 AEC (62-11016).
Order from OTS $2.75 AEC-tr-4576

Trans. of Radiokhimiya (USSR) 1960, v. 2, no. 1, p. 3-129 and no. 2, p. 133-262.

DESCRIPTORS: *Radiochemistry, Radioactive isotopes, Nitric acid, Phosphates Butyl radicals, Absorption, Glass, Uranyl radicals, Nitrates, Spectrographic analysis, Radium, Barium, Mercury electrodes, Europium, *Rare earth elements, Ion exchange, Copper, Ruthenium, Uranium, Fission, Actinium series, Strontium, Carbon, Germanium, Silver, Palladium, Radioactivity,

Molecules, *Precipitation, *Crystallization, Supersaturation, Americium, Yttrium, Cerium, Melting, Molecules, Oxygen, Sulfates, Phosphorus compounds, Thorium, Potassium, Labeled substances, Carbon dating, Lanthanum compounds.

Contents:

Extraction of a mixture of radioactive isotopes with esters of bretylphosphinic acids, by A. V. Nikolaev

The effect of temperature on the extraction of uranyl-, plytonium-, ruthenium-, and zirconium-nitrates with tributyl phosphate, by V. B. Shevchenko and I. A. Fedorov

The effect of temperature on the extraction of nitric acid with tributyl phosphate, by N. M. Adamskii and others

Sorption of radioactive elements by glass, by N. G. Rozovskaya

The structure of uranyl nitrate hexahydrate, by V. M. Vdovenko, E. V. Stroganov and V. N. Zandin

A spectrophotometric study of the system $UO_2(NO_3)_2$-ROH-H_2O_2-H_2O, by A. M. Gurevich, and others

The separation of radium from barium by exchange between amalgam and solution, by B. P. Konstantinov, B. P. Kiselev, and G. P. Skrebtsov

The separation of radium from barium by electrolysis at a mercury cathode, by B. P. Konstantinov, B. P. Kiselev, and G. P. Skrebtsov

The separation of radioactive isotopes at a mercury cathode. I. The study of the electrochemical behavior of europium, by V. P. Shvedov and Fu I-Bei

Separation of rare-earth elements by continuous electrophoresis. II. Separation by means of ethylene diaminetetraacetic acid, by V. P. Shvedov and A. V. Stepanov

Separation of groups of elements by ion exchange. III. Elements of the copper group, by B. K. Preobrazhenskii and Yu. P. Saikov

Separation of groups of elements by ion exchange. IV. Elements of analytical group III, by B. K. Preobrazhenskii, V. P. Tselikhovskii and V. N. Mel'nikov

Determination of the charge of polynuclear complex ions of ruthenium by the method of ion exchange, by A. A. Grinberg, A. M. Trofimov and L. N. Stepanova

Radiochemical investigation of products of uranium fission by 660 Mev protons, by A. K. Lavrukhina and S. S. Rodin

Isotopic composition of uranium in natural samples, by E. A. Isabaev, E. P. Usatov and V. V. Cherdyntsev

An investigation of actinium in natural system, by E. A. Isabaev, U. Kh. Asylbaev, and V. V. Cherdyntsev

Determination of radioactive strontium in open-water reservoirs, by V. L. Zolotavin and L. K. Ponomareva

Production of elementary carbon labeled with C^{14}, by O. I. Andreeva and A. I. Il'ina

Determination of radioactive admixtures in preparations of germanium-71 and the production of radiochemically pure germanium-71, by M. M. Golutvina and E. A. Tikhomirova

Preparation of silver-111 from palladium irradiated with neutrons, by V. I. Levin, N. G. Serebryakov and I. V. Meshcherova

International Congress on pure and applied chemistry (no. 17) by Yu. A. Zolotov

The concept of molecular radioactivity in the synthesis of materials labeled with radioactive isotopes, by L. B. Dashkevich

The seventieth birthday of Vitalii Grigor'evich Khlopin, by V. I. Lenin and science

The microcomponent coprecipitation during the crystallization of the macrocomponent from a supersaturated solution, by I. V. Melikhov, Chiu Hsaiao-Si, and M. S. Merkulova

Studies on the coprecipitation of Am and Eu with lanthanum oxalate, by V. I. Grenshchikova and R. V. Bryzgalova

Studies on the coprecipitation of $Y^{(III)}$ with lanthanum oxalate, by V. I. Grenshchikova and R. V. Bryzgalova

Coprecipitation of trivalent cerium with uranium oxalate, by D. I. Bykhovskii and A. A. Grinberg

Study of the effect of complex formation in a melt on the coefficient of crystallization in the systems $PbCl_2$-$ThXCl_2$-KCl and $CaCl_2$-$CdCl_2$-Kcl, by V. R. Klokman, K. G. Myakishev and V. S. Smirnov

Salting-out and exchange of water molecules nearest to ions in acqueous solutions, by O. Ya. Samoilov and V. I. Tikhimirov

The nonmionotonic variation of chemical properties of oxygen-containing ions of pentavalent actinides with increase of the atomic number of the element, by Yu. A. Zolotov

Study of complex formation of yttrium. I. Yttrium oxalates, by M. G. Panova, V. I. Levin, and N. E. Breshneva

Study of complex formation of yttrium, II. Sulfate, nitrate and chloride complexes, by M. G. Panova, N. E. Brezhnova and V. I. Levin

Complex formation of uranyl nitrate with organic phosphorus compounds, II, by M. V. Pushlenkov, G. P. Nikitina and V. G. Voden

A study of the possibility of separation of thorium from certain elements by extraction using the method of labeled atoms, I, by I. A. Tserkovnitskaya and A. K. Charykov

Separation of radioactive isotopes at a dropping mercury cathode. II. Study of the separation of rare-earth elements which are not stable in the bivalent state, by V. P. Shvedov and Fu-I-bei

Separation of radioactive isotopes at a dropping mercury cathode. III. Study of cerium separation, by V. P. Shvedov and Fu-I-bei

The effects of the molecular size of the complex-forming agent and the temperature on the ion-exchange separation of the radioactive rare-earth elements, by B. K. Preobrazhenskii, A. V. Kalyamin and O. M. Lilova

The existence of double sulfates of potassium and barium, by V. N. Bobrova

Preparation of labeled carbon from radioactive carbon dioxide, by A. D. Mikhailin and N. N. Postnikov

Ligand exchange in HgX_4^{2-} ions, by A. A. Grinberg and V. E. Mironov

A comparative evaluation of the methods of preparation of radium-beryllium neutron sources, by V. M. Permyakov

The scintillation technique for natural radiocarbon counting and its application to the determination of the absolute age, by I. E. Starik, Kh. A. Arslanov and A. P. Zharkov

Corrected values for the instability constant of the complex compounds of certain lanthanides with the ethylenediamine tetraacetic acid anion, by V. P. Shvedov and A. V. Stepanov

Author and subject indexes, nos. 1-2.

Berens, Tadeusz.
THE POLISH ATOMIC REACTOR EWA AT SWIERK. 9 June 61 [21]p. JPRS: 8422.
Order from OTS or SLA $2.60 62-19314

Trans. of Przeglad Mechaniczny (Poland) 1960, v. 19, no. 17, p. 510-516.

DESCRIPTORS: *Research reactors, *Poland, Design, Operation, Nuclear physics, Radiochemistry, Laboratory equipment.

Glushko, A. P., Markov, L. K., and Pilyugin, L. P.
ATOMIC WEAPONS AND ANTI-ATOMIC DEFENSE, CHAPS. 7 AND 10, tr. by Elena Wolkonsky. [1961] [8]p. H-6082.
Order from OTS or SLA $1.10 60-17622

Trans. of mono. [Atomnaya Oruzhie i Protivoatomnaya Zaschita] Moscow, 1958, p. 242-244 and 375-385. Another trans. is available from LC or SLA mi$6.00, ph$18.30, in 59-11147, JPRS(NY)-L-475, 26 Nov 58, 114p.

DESCRIPTORS: *Radioactivity, Countermeasures, Radioactive fall-out.

Kolbanovskii, Yu. A. and Polak, L. S.
KINETIC EQUATIONS OF CHEMICAL MONOMOLECULAR RADIATION REACTIONS WITHOUT CHAIN FORMATION (Kineticheskie Uravneniya Netsepnykh Monomolekulyarnykh Radiatsionno-Khimicheskikh Reaktsii). [1961] [10]p. (foreign text included) 3 refs.
Order from OTS or SLA $1.10 62-10700

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 2, p. 361-364.

Portions of this report will not reproduce well.

DESCRIPTORS: *Radiochemistry, Chemical reactions, *Reaction kinetics, Monocyclic compounds, Molecules, Additives.

Relations are derived that involve all basic classes of chemical monomolecular radiation reactions which do not form chains and which can be investigated experimentally, especially on kinetic parameters of chemical radiation processes.

Koszegi, Frigyes.
DATA ON THE HUNGARIAN CENTRAL PHYSICS RESEARCH INSTITUTE. 16 Jan 61 [6]p. JPRS: 4331.
Order from OTS or SLA $1.10 62-19331

Trans. of Nepszabadsag (Hungary) 1960 [v. 18] 7 Nov, p. 6-7.

DESCRIPTORS: *Nuclear physics, Scientific personnel, Atomic energy engineering, Hungary.

Nuclear Engineering and Power

Zastrow, E.
KAHL EXPERIMENTAL ATOMIC POWER STATION: MATERIALS. Feb 62.
Order from BISI £4 BISI-2534

Trans. of Atomwirtschaft (West Germany) 1961, v. 6, Jan, p. 66-72.

DESCRIPTORS: *Nuclear power plants, Materials, *Steel, Stainless steel, Zirconium, Hydrogen embrittlement

Zenkevich, B. A., Remizov, O. V., and Subbotin, V. I.
THE INFLUENCE OF CHANNEL GEOMETRY ON CRITICAL THERMAL LOADS WITH FORCED FLOW OF WATER. 1 Feb 62 [15]p. 4 refs. FTD-TT-62-62; SC-969; AD-271 856.
Order from OTS or SLA $1.60 62-19280

Unedited rough draft trans. of paper for presentation at the Conference [on] Heat [and Mass] Transfer [held in] Minsk, 5-10 June 61.

DESCRIPTORS: *Light water reactors, *Reactor cores, Heat transfer, Heat exchangers, Reactor coolants, *Boiling, *Boiling water reactors, Thermal conductivity.

The experimental functions $q_{cr} = f(w)$ with $P = \text{const}$ and $\Delta t_s = \text{const}$ were obtained for triangular and rectangular tubes. The critical heat flows for these tubes were compared with q_{cr} for annular tubes under identical experimental conditions. It was established that the value of the critical thermal load decreases considerably when the heat-releasing surface has angles of 15 and 90° with rounded corners (0.5 and 1.0 mm radius): in this case, the influence of the corners on q_{cr} depends on the flow parameters of the water.

PHYSICS

NEWS OF HUNGARIAN SCIENTIFIC CONFERENCES. 14 Mar 61 [11]p. JPRS: 4457.
Order from OTS or SLA $1.60 62-19420

Trans. of Fizikai Szemle (Hungary) 1960, v. 10, no. 12, p. 376-379.

DESCRIPTORS: *Conferences, *Hungary, *Physics, *Optics, Optical systems, Cosmic rays, Terrestrial magnetism, Magnetism, Particles, Stars, Nuclear reactions, Gas discharges, Plasma physics, Magnetohydrodynamics, Hydrodynamics, Electromagnetic waves, Propagation, Ferrites, Dosimeters, X-rays, Electron tubes, X-ray generators, Reactor moderators, Organic compounds, Neutrons, Scattering.

Contents:
Annual Hungarian Conference of Physicists (no. 7)
Optical conference at Budapest, 1960.

POLISH PHYSICS SOCIETY (WARSAW SECTION). 29 Jan 62 [8]p. JPRS: 12186.
Order from OTS or SLA $1.10 62-19584

Trans. of Postepy Fizyki (Poland) 1961, v. 12, no. 4, p. 486-488.

DESCRIPTORS: *Physics, Scientific personnel, Poland.

Amatuni, A. Ts. and Korkhmazyan, N. A.
RADIATION OF A CHARGED PARTICLE IN A MEDIUM WITH A PERIODICALLY VARYING DENSITY. 17 Nov 61 [15]p. 9 refs. FTD-TT-61-115; AD-267 728.
Order from OTS or SLA $1.60 62-15173

Unedited rough draft trans. of Akademiya Nauk Armyanskoi SSR [Erevan]. Izvestiya. Seriya Fiziko-Matematicheskikh Nauk, 1960, v. 13, no. 5, p. 55-64.

DESCRIPTORS: *Particles, Dielectrics, Energy, *Cerenkov radiation, Magnetic fields, Lattices, Diffraction gratings, Harmonic analysis, Differential equations, Integration, Fourier analysis.

The energy losses by a particle to Cerenkov radiation are examined by a new method. (See also 59-20265, 61-28530).

Andreyanov, V.
CONCERNING THE PROBLEMS OF MODERN ELECTRONICS. 16 Feb 62, 6p. (2 figs. omitted) JPRS: 12666.
Order from OTS $0.50 62-11179

Trans. of Nauchno-Tekhnicheskie Obshchestva SSSR, 1961 [v. 3] no. 11, p. 40-42.

DESCRIPTORS: *Electronics, Electronic equipment, *Miniature electronic equipment, Radio equipment, Design, Reliability, *Semi-conductors, *Dielectrics, *Plasma physics, Noise (Radio), Reduction, *Frequency, Wave characteristics, Optics, Infrared radiation, Electromagnetic waves.

Contents:
The problem of miniaturizing electronic components and instruments
Utilization of the new properties of semiconductors and dielectrics molecular and atomic effects, and the properties of electron plasma
Abatement of the internal noise in electronic devices
The appropriation of new wave frequency intervals
Increasing the reliability of electronic equipment.

Gyorgy, Istvan.
PROFESSOR GOMBAS DISCUSSES THE PROSPECTS OF PHYSICS IN HUNGARY. 17 Mar 61 [5]p. JPRS: 4463.
Order from OTS or SLA $1.10 62-19322

Trans. of Nepszabadsag (Hungary) 1960, v. 18, no. 294, p. 11.

DESCRIPTORS: *Physics, *Nuclear physics, *Relativity theory, Hungary.

Klepikov, N. P. and Sokolov, S. M.
ANALYSIS AND PLANNING OF EXPERIMENTS BY THE METHOD OF MAXIMUM LIKELIHOOD. Apr 62, 127p.
Order from PP $9.00

Trans. of an unidentified Russian mono., n.p., n.d.

DESCRIPTORS: *Physics, Experimental data, Analysis, Instruction manuals, Particles, Scattering, Quantum statistics, Least squares method, Functions, Measurement, Labor, Consumption.

Lakatos, Sandor.
INFRA-RED GAS ANALYZER. 6 Dec 61 [16]p. JPRS: 11424.
Order from OTS or SLA $1.60 62-19679

Trans. of Meres es Automatika (Hungary) 1961, v. 9, no. 4, p. 123-125.

DESCRIPTORS: *Infrared gas analyzers, Construction, Installation, Operation

The Research Institute for Instrument Industry developed an infrared gas analyzer based on the principle of infra-red light absorption, which is useful in the analysis of compound gases. (The abbreviated name of the gas analyzer is MIGA.) The MIGA is capable of continuously analyzing the concentration of practically every gas of heterogeneous atomic structure. Its selective operation makes it possible to determine the components of gas mixtures whose independent measurement by chemical analysis is extremely difficult. (Author)

Lapuk, B. B. and Evdokimova, V. A.
DE WAARDE VAN DE EXPONENT n BIJ DE FILTRATIE VAN HOMOGENE VLOEISTOFFEN EN GASSEN (The Value of the Exponent n at the Filtration of Homogeneous Liquids and Gases) 6p. 5 refs. MTWL: 411. (text in Dutch).
Order from OTS or ETC $1.55 61-17999

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 73, no. 4, p. 675-677.

DESCRIPTORS: Liquids, Gases, *Fluid flow, *Gas flow, Strainers, Theory.

Priss, L. S.
DYNAMIC PROPERTIES OF VISCOELASTIC MATERIALS DURING NONHARMONIC LOADING (STRESSING) (Dinamicheskie Svoisrva Vyazko-Uprugikh Materialov pri Negarmonicheskom Nagruzhenii). 28 Feb 61 [17]p. (3 Eng. language refs. omitted) 2 refs. MCL-820/ 1 2; AD-258 487.
Order from OTS or SLA $1.10 61-23675

Unedited rough draft trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960, v. 2, no. 9, p. 1309-1319.

DESCRIPTORS: *Materials, Viscosity, Elasticity, *Polymers, Mechanical properties, Stresses, Load distribution, Deformation, Internal friction, Relaxation time, Theory, *Elastomers, *Dynamics.

Expression were obtained for the dynamic modulus and for the modulus of internal friction of viscoelastic materials, the properties of which are described by a tri-elemental model and a model with continuous relaxation time spectrum. An analysis was made of the nature of stress/time dependences corresponding to various conditions of non-harmonic change in deformation. Graphis dependences are given for a series of concrete cases. An analysis was made of the influence of various parameters of the nonharmonic condition: duration of intermissions, ratios between duration of intermissions, asymmetry of the cycle with respect to time and sign, magnitude of the plateau and curvature of impulse front on the magnitude of mechanical losses in the material, the properties of which are described by a model with continuous relaxation time spectrum. (Author)

Szabo, Janos.
MAGNETOHYDRODYNAMIC SHOCK WAVES. 20 Dec 61 [29]p. JPRS: 11725.
Order from OTS or SLA $2.60 62-19669

Trans. of Magyar Fizikai Folyoirat (Hungary) 1961 [v. 9] no. 1, p. 35-48.

DESCRIPTORS: *Magnetohydrodynamics, Hydrodynamics, *Shock waves, Plasma physics, Propagation, Velocity, Theory, Mathematical analysis, Differential equations, Vector analysis

On the basis of fundamental magnetohydrodynamic equations, the conservation theorems are established with respect to ideal plasma. The fundamental equations for magnetohydrodynamic shock waves are then derived for arbitrary discontinuity surfaces. It is proven that the magnetohydrodynamic shock waves are of the compression-type, similarly to gaseous dynamic shock waves. (Author)

Volkov, S. D.
STATISTICAL STRENGTH THEORY. 23 Jan 62 [365]p. 135 refs. MCL-999; AD-271 813.
Order from OTS or SLA $21.00 62-19646

Unedited rough draft trans. of mono. Statisticheskaya Teoriya Prochnosti, Moscow/Sverdlovsk, 1960, 174p.

DESCRIPTORS: Textbooks, *Applied mechanics, *Structures, *Machines, Design, Theory, Stresses, Mathematical analysis, Mathematical prediction, Statistical analysis, Materials, Elasticity, Deformation, Microstructure, Mechanical properties.

Continuous elastic and elastic-plastic polycrystalline media are analyzed in order to formulate a strength theory for any volume stressed state. The strength theory is formulated on data of small elastic-plastic deformations and on the distribution of stresses in a microscopically inhomogeneous medium for given loads on the contours of the body. Previous studies (mainly Soviet) on the mechanics of materials and the physics of solid bodies are used in direct statistical generalizations of criteria of elasticity and strength of materials that are in any complex stressed state. Common statistical criteria for elasticity and fracture are established in the form of an "allowance" for the probability of their development. Strength conditions are derived for a complex stressed state of the material, depending on the magnitude of the body under load. Equations of the generalized Hook's law and the theory of small elastic-plastic deformations are substituted for equations of the theory of creep in order to clarify fundamental rules of the kinetics of after-effect of a microscopically inhomogeneous medium. Strength conditions are obtained for (1) slowed fracture under complex stressed states, and (2) fatigue fracture under cyclic symmetrical and nonsymmetrical loads.

Acoustics

Barkhatov, A. N. and Myasnikov, S. P., and Shmelev, I. I.
EXPERIMENTAL INVESTIGATION OF THE FIELD IN ONE OF THE CASES OF ANTI-CHANNEL PROPAGATION OF SOUND [AND] STUDY BY MODEL OF FIELD OF PULSE RADIATOR IN THE REGION OF THE FIRST EFFECTIVE SHADOW IN THE UNDERWATER SOUND CHANNEL. [1961] [6]p. 6 refs. [DSIR NLL] M. 4616.
Order from OTS or SLA $1.10 62-15690

Trans. of #Akusticheskii Zhurnal (USSR) 1961, v. 7, no. 1, p. 18-20 and 106-108.

DESCRIPTORS: *Sound, *Underwater sound, Propagation, Velocity, Attenuation, Reflection, Refraction, Waveguides.

The first paper is a study of the sound field in a layered medium with a maximum sound velocity below the level of the surface of the liquid. It is shown experimentally that on the level of the maximum and below it a region of geometrical shadow is formed and this passes over into space with a spherical law of attenuation of sound, independent of the numerical value of the velocity gradient of the sound. Above the maximum of the velocity a surface channel is formed in which the change in the intensity of the sound with distance from the radiator follows a cylindrical law. In the second paper, supplementing a paper previously published (Akusticheski Zhurnal 5: 403-407, 1959; available in translation from LC or SLA as 61-13333) the experimental values of the amplitude of a sound pulse in the region of the first effective shadow where there is an underwater sound channel are compared with the theoretical values.

Protasov, V. R. and Romanenko, E. V.
ON THE NATURE OF SOUNDS PRODUCED BY CERTAIN BLACK SEA FISH. 29 Dec 61 [5]p. 5 refs. JPRS: 11738.
Order from OTS or SLA $1.10 62-15354

Trans. of Akademiya Nauk SSSR. Doklady, 1961, v. 139, no. 3, p. 726-728.

DESCRIPTORS: *Underwater sound, Sound transmission, Marine biological noise, *Fishes, Black Sea.

Electricity and Magnetism

LIFE AND THE MAGNETIC FIELD. 2 Feb 62 [37]p. JPRS: 12273.
Order from OTS or SLA $3.60 62-15784

Trans. of Nauka i Zhizn' (USSR) 1961 [v. 28] no. 7, p. 76, 78-90; Nowe Drogi (Poland) 1961 [v. 15] no. 10, p. 121-127.

DESCRIPTORS: *Biology, *Magnetic fields, Stimulation, Psychology, Magnetism, Growth, Cancer, Scientific research, Theses, Industry, Commerce, Magnets.

Contents:
Life and the magnetic field
The magnetic field: a strange stimulus, by Yu. A. Kholodov
Convince yourself
Experiments on psychomagnetism, by L. L. Vasil'ev
The Perm' Medical Institute
Permanent magnet affects the growth of sarcoma, by M. A. Ukolova and G. G. Khimich
Magnetotropism, by A. V. Krylov and G. A. Tarakanova
Deserves attention, by A. L. Kursanov
Experiments of an English Professor L. D. Audas (Bellford College)
Finer investigation methods are needed, by A. S. Presman
The hypothesis of candidate of biological sciences, by G. M. Erdman
On the problem of biomagnetism, by L. A. Blyumenfel'd
Consumer industry and market problems, by Wladyslaw Kakietek.

Vyuchina, A. M., Druzhinin, V. V. and others.
ACCOMMODATIEVERSCHIJNSELEN VAN DE MAGNETISCHE PERMEABILITEIT VAN MAGNETIET (Accomodation Phenomena of the Magnetic Permeability of Magnetite) tr. by J. H. van Santen. 20p. MTWL: 179. (text in Dutch).
Order from OTS or ETC $1.85 61-17845

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1947, v. 17, no. 2, p. 129-142.
A trans. in English is available from SLA as RT-2889.

DESCRIPTORS: *Magnetite, Permeability, Magnetism, *Ferromagnetism.

Molecular Physics and Spectroscopy

Alekseeva, A. I.
SPECTRAALANALYSE VAN METALLISCH LOOD (Spectrum Analysis of Metallic Lead) tr. by G. J. M. Fritschy. 8p. 4 refs. MTWL: 338. (text in Dutch).
Order from OTS or ETC $1.55 61-17932

Trans. of Zavodskaya Laboratoriya (USSR) 1949, v. 15, p. 700-703.

DESCRIPTORS: *Leads, Metals, *Spectrographic analysis.

Belov, N. V.
NIEUWE STRUCTUURTYPEN MET EEN DICHTSTE STAPELING DER SAMENSTELLENDE ATOMEN (New Structure Types with Closest Packing of the Atoms) tr. by J. H. van Santen. 10p. 5 refs. MTWL: 387. (text in Dutch).
Order from OTS or ETC $1.55 61-32025

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 65, p. 677-679.

DESCRIPTORS: *Crystals, Transuranic elements, Uranium, *Heavy element compounds, Atoms, Lattices.

Frish, S. E. and Yakhontova, V. E.
NEW DATA REGARDING THE EXCITATION FUNCTIONS OF HELIUM LINES (Novye Dannye o Funktsiyakh Vozbushdeniya Linii Geliya) tr. by Archer. Oct 58, 7p. (foreign text included) 7 refs. [DSIR NLL] M. 4363.
Order from OTS or SLA $1.10 62-13146

Trans. of Optika i Spektroskopiya (USSR) 1958, v. 4, no. 3, p. 402-404.

DESCRIPTORS: *Helium, Spectrographic data, Excitation, Optics, Function.

Koslov, V. P. and Feodorova, E. O.
EFFECT OF THE RESOLVING POWER OF A SPECTRAL INSTRUMENT ON THE ACCURACY OF DETERMINING THE INTEGRAL TRANSMISSION (Vliyanie Razreshayushchei Sposobnosti Spektral'nogo Pribora na Tochnost' Opredeleniya Integral'nogo Propuskaniya) tr. by M. C. Selby. 26 May 61 [12]p. (foreign text included) 2 refs.
Order from OTS or SLA $1.60 61-27253

Trans. of #Optika i Spektroskopiya (USSR) 1961, v. 10, no. 5, p. 663-666.

DESCRIPTORS: *Infrared spectroscopy, Resolution, Atmosphere, *Infrared radiation, Transmission, Integrals, Absorption spectra.

Determination of the integral transmission of individual sections inside absorption bands by means of a recorded spectrum having a finite resolving power is investigated. The correlation was found between the upper limit of the resulting error of the function of the apparatus and the averaging interval. (Author)

Ostrovskii, Yu. I. and Penkin, N. P.
ABSOLUTE OSCILLATOR STRENGTHS FOR LINES OF CHROMIUM, MANGANESE, AND COPPER. [1961] [13]p. (5 figs. omitted) 23 refs. AERDL T-1459; RIS E-818.
Order from OTS or SLA $1.60 62-15509

Trans. of Optika i Spektroskopiya (USSR) 1957, v. 3, no. 3, p: 194-201.
Also available from RIS $24.00 as RIS E-818.

DESCRIPTORS: *Chromium, *Manganese, *Copper, Resonance, Oscillation, Vapor pressure, Interferometers, Spectrographic analysis.

Rozhdestvenskiy's interference-fringe method was used in measuring the absolute f for the resonance lines of Cr (0.49, 0.39, 0.28 & 0.15 for the lines 3578, 3593, 3605, and 4254 Å respectively), of Mn (0.027, 0.040, and 0.056 for the lines 4034, 4033, and 4031 Å), and of Cu (0.74 and 0.38 for the 3247 and 3274 Å lines). Measurements have also been made of the relative f for other lines of these elements. These and earlier measurements are used in order to deduce the absolute f for 34 lines of Cr, 10 of Mn, and 3 of Cr. (Author)

Ostrovskii [Yu] I., Parchevskii, G. F., and Pyenkin, N. P.
RELATIVE VALUES OF OSCILLATOR STRENGTHS IN THE SPECTRA OF TITANIUM AND MANGANESE. [1961] [18]p. (6 figs. omitted) 22 refs. AERDL T-1460; RIS E-819. AD-266 653
Order from OTS or SLA $1.60 62-15508

Trans. of [Optika i Spektroskopiya] (USSR) 1956, v. 1, no. 7, p. 821-832.
Also available from RIS $25.00 as RIS E-819.

DESCRIPTORS: *Titanium, *Manganese, Spectrographic analysis, Excitation, Oscillation.

D. S. Rozhdestvensky's "hacken methode" was used to measure the relative values of the oscillator strengths of 56 lines of TiI (between 3200 A and 5200 A) and of 10 lines of MnI (between 2800 A and 5400 A). The results obtained are compared with those from other investigations. The study of the conditions of excitation in a high temperature oven is continued. (Author)

Shostenko, Yu. V. and Shtandel', A. E.
SPECTROGRAFISCHE ANALYSE VAN EEN MENGSEL VAN ISOMERE XYLOLEN (Spectrographical Analysis of a Mixture of Isomeric Xylenes) tr. by G. J. M. Fritschy. 11p. 8 refs. MTWL: 306. (text in Dutch).
Order from OTS or ETC $1.55 61-17960

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 408-413.

DESCRIPTORS: *Xylenes, *Spectrographic analysis, Molecular isomerism.

Tolstoi, N. A.
OVER DE THEORIE VAN STROMINGSDUBBELBREKING (The Theory of Flow Birefringence). 8p. 6 refs MTWL: 318. (text in Dutch).
Order from OTS or ETC $1.55 61-17954

Trans. of Akademiya Nauk SSSR. Doklady, 1948, v. 59, no. 9, p. 1563-1566.

DESCRIPTORS: *Refractive properties, *Fluid flow, Theory.

Tsvetkov, V. N. and Frisman, E. V.
DYNAMISCHE DUBBELBREKING EN RELAXATIETIJD VAN NORMALE ALCOHOLEN (Flow Birefringence and Relaxation Time of Normal Alcohols) 8p. 9 refs. MTWL: 315. (text in Dutch).
Order from OTS or ETC $1.55 61-17951

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 67, no. 1, p. 49-52.

DESCRIPTORS: *Alcohols, Refractive properties, Fluid flow, *Molecular rotation.

Solid State Physics

In', Shi-duan' and Regel', A. R.
ON THE INFLUENCE OF THE DEFICIENCY OF TELLURIUM FILMS ON THE VALUE OF THE ELECTRON - HOLE MOBILITY RATIO. 31 Jan 62 [7]p. (refs. omitted). Trans. Log no. 1273-Z.
Order from OTS or SLA $1.10 62-15723

Trans. from #Fizika Tverdogo Tela (USSR) 1961, v. 3, no. 6.

DESCRIPTORS: Hall effect, Conductivity, *Tellurium, *Metal films, Thickness, Measurement, Crystals, Lattices, Temperature, Annealing, *Solid state physics.

The temperature dependencies of electroconductivity and Hall effect were measured between -100° and +200°C for tellurium films of 1.1, 14 and 300 μ thickness. It was shown that by annealing tellurium films, 300 μ thick, samples can be obtained, in which a change of sign of the Hall coefficient is observed. Analysis of the results leads to the conclusion that large structural deficiency results in the equalization of the mobility of electrons and holes. (Author)

Krajsovszky, Jozsef and Ujhelyi, Sandor.
THE PRODUCTION OF THIN ANTHRACENE MONOCRYSTAL PLATES. 29 Dec 61 [7]p. JPRS: 11688.
Order from OTS or SLA $1.10 62-19670

Trans. of Magyar Fizikai Folyoirat (Hungary) 1961, v. 9, no. 1, p. 81-84.

DESCRIPTORS: *Anthracenes, *Single crystals, Sheets, Production, Crystals.

In the course of cleaning anthracene for monocrystal growing, we observed that in sublimation under appropriate conditions thin anthracene plates with large surface area emerge. The thin anthracene plates do not absorb gamma rays, but are practicable in the detection of beta rays with low energies. The plates can be manufactured with a high degree of purity and their large surface area adapts them to special tasks as well. The optimum conditions for growing relatively large and pure plates are discussed. (Author)

Pekar, S. I.
THEORIE DER POLARONEN (Theory of the Polarons) tr. by J. H. van Santen. 16p. 6 refs. MTWL: 391. (text in Dutch).
Order from OTS or ETC $1.85 61-32010

Trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1949, v. 19, no. 9, p. 796-806.

DESCRIPTORS: *Crystals, *Lattices, Ions, Oscillation, Quantum mechanics, Theory.

Tsidilkovskii, I. M.
RECTIFICATION BY SEMICONDUCTORS IN A THERMAL FIELD. 7p. 6 refs. NSF-tr-85. MTWL: 644.
Order from OTS or ETC $1.55 62-26016

Trans. of Akademiya Nauk SSSR. Doklady, 1953, v. 91, p. 63-66.
Another trans. is available from SLA as RT-201.

DESCRIPTORS: *Semiconductors, Thermal stresses, *Rectifiers.

Thermodynamics

NEW SOVIET ORDER WOULD CLARIFY RUSSIAN USE OF THE ABSOLUTE JOULE: TO ALL SCIENTIFIC WORKERS IN THE USSR CONDUCTING WORK CONNECTED WITH MEASUREMENT OF THERMAL VALUES (EDITORIAL) tr. by Zelda D. Knowles. 18 Nov 59, 3p.
Order from OTS or SLA $1.10 62-15090

Trans. of Uspekhi Khimii (USSR) 1959, v. 28, no. 9, p. 1134.

DESCRIPTORS: Thermochemistry, *Calorimetry, Standards, Thermodynamics

The paper discusses the directive adopted at the April 20, 1959 session of the Commission on Chemical Thermodynamics in the Department of Chemical Sciences, Academy of Sciences, USSR.

Agafonova, M. E., Baron, V. V., and Savitskii, E. M.
STRUCTURES AND PROPERTIES OF ALLOYS OF NIOBIUM AND TIN. 21 Sep 61 [12]p. 6 refs. FRI Trans. no. 161; [DSIR] NLL M. 4635.
Order from OTS or SLA $1.60 62-15709

Trans. of Akad[emiya] Nauk SSSR. O[tdelenie] T[ekhnicheskikh] N[auk]. Izbestiya: Metallurgiya i Toplivo, 1959, no. 5, p. 138-141.

DESCRIPTORS: *Niobium alloys, *Tin alloys, *Superconductivity, *Transition temperature, Thermodynamics.

The Nb-Sn constitutional diagram has been established for the first time by microscopy, hardness determinations, thermal analysis and X-rays. Nb_3Sn is formed by a peritectic reaction at $2000^{o} \pm 25^{o}C$. Alloys which contain 60% by weight or more stratifie in the liquid. The monotectic temperature is $730^{o} \pm 5^{o}C$. Solid solubility of Sn in Nb is considerable. Nb_3Sn (29.87 wt. %) has a β - W structure with a 5.29 Å. The hardness is 900 kg/mm^2. The compound has the highest superconducting transition temperature 18.05°K. Alloys in hard solutions of Sn in Nb are harder and more oxidation-resistant than pure Nb. (Author)

Avdeeva, A. V.
THERMODYNAMIC DATA FOR GASEOUS SULPHUR COMPOUNDS. (I). 23p. 33 refs. MTWL: 397.
Order from OTS or ETC $1.89 61-32015

Trans. of [Khimicheskaya Promyshlennost'] (USSR) 1937, v. 14, p. 1688-1693.

DESCRIPTORS: *Sulphur compounds, Gases, *Thermodynamics.

Bakhurov, V. G. and Boreskov, G. K.
DE EFFECTIEVE WARMTEGELEIDINGSCOEFFICIENT VAN KATALYSATORMASSA'S (The Effective Coefficient of Heat Conducting of Contact Masses) tr. by G. J. M. Fritschy. 27p. 10 refs. MTWL: 251 (text in Dutch).
Order from OTS or ETC $2.41 61-17891

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1947, v. 20, p. 721-738.

DESCRIPTORS: *Heat transfer, *Catalysts, Gas flow, Measurement.

Gel'fman, M. Sh.
DAMPSPANNING VAN MENGSELS VAN OLEUM EN SALPETERZUUR (Vapor Pressure of Mixtures of Oleum and Nitric Acid) tr. by G. J. M. Fritschy. 8p. 3 refs. MTWL: 211. (text in Dutch).
Order from OTS or ETC $1.55 61-17915

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1946, v. 19, p. 1358-1363.

DESCRIPTORS: *Sulfuric acid, *Nitric acid, Sulfur compounds, Oxides, Mixtures, *Vapor pressure.

Gel'fman, M. Sh.
DAMPSPANNING VAN SALPETERZUUR BOVEN MENGSELS VAN ZWAVEL- EN SALPETERZUUR (Vapor Pressure of Nitric Acid over Nitrosulfuric Mixtures). 9p. 6 refs. MTWL: 218. (text in Dutch).
Order from OTS or ETC $1.55 61-17922

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 1272-1277

DESCRIPTORS: *Nitric acid, *Vapor pressure, Sulfuric acid, Mixtures.

Gel'fman, M. Sh.
ONDERZOEK VAN DE SAMENSTELLING VAN MENGZUREN UIT HET WARMTE-EFFECT DER MENGING (Investigation of the Composition of Acid-mixtures by the Heats of Mixing) tr. by G. J. M. Fritschy. 12p. 6 refs. MTWL: 217. (text in Dutch).
Order from OTS or ETC $1.85 61-17921

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1948, v. 21, p. 1099-1106.

DESCRIPTORS: *Sulfuric acids, *Nitric acid, Sulfur compounds, Oxides, Mixtures, Thermodynamics, *Heat of solution.

Kazarnovskii, Ya. S. and Karapet'yants, M. Kh.
THERMODYNAMISCHE EIGENSCHAPPEN VAN GECOM PRIMEERDE AMMONIAK (Thermodynamic Properties of Compressed Ammonia) 16p. 11 refs. MTWL: 220. (text in Dutch).
Order from OTS or ETC $1.85 61-17924

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1943, v. 17, p. 172-186.

DESCRIPTORS: *Ammonia, *Thermodynamics, High pressure research.

Kostryukova, M. O. and Strelkov, P. G.
SPECIFIC HEAT OF SOLID OXYGEN BELOW 4°K. 6p. 8 refs. NSF-tr-87. MTWL: 645.
Order from OTS or ETC $1.55 62-26017.

Trans. of Akademiya Nauk SSSR. Doklady, 1953, v. 90, p. 525-528.

DESCRIPTORS: *Oxygen, Solids, *Specific heat.

Linde, Hartmut.
APPLICATION OF THE SHADOW METHOD (DETERMINATION OF OPTICAL HETEROGENEITY) TO INVESTIGATIONS OF MASS TRANSFER THROUGH INTERFACIAL BOUNDARIES) (Primenenie Tenevogo Metoda Opredeleniya Opticheskoi Neodnorodnosti k Issledovaniyu Protsessov Perenosa Veshchestva Chenez Poverkhnost' Pazdela Faz) tr. by G. Fulford. Aug 60 [11]p. (10 figs. omitted) 24 refs. [DSIR NLL] M.4626.
Order from OTS or SLA $1.60 62-15700

Unedited trans. of #Kolloidnyi Zhurnal (USSR) 1960, v. 22, p. 323-333.

DESCRIPTORS: *Mass transfer, Convection, Diffusion, *Spark shadowgraph photography, Detergents.

A simple shadow-projecting apparatus has been developed, permitting the use of various modifications of the shadow technique. The applicability of a number of shadow methods to investigate and demonstrate mass transfer processes has been elucidated. These are particularly affected by surface-active substances with clearly defined amphipathic structures, such as sodium alkylsulphates of chain lengths ranging from 8 to 18 carbon atoms. Substances such as lower alcohols acetone, dioxane, etc., do not considerably affect mass transfer or the properties of the interface. The transfer of such a typical surface-active compounds (lower homologs) in a two-phase system is retarded when typical surface-active agents are added at phase equilibrium and accelerated when the lather are added under non-equilibrium conditions. Transfer processes under phase equilibrium conditions may approach the most closely ideal behaviour on solid surfaces when the laws of interaction between diffusion and forced convection hold. Free convection at the surface and the resultant enhanced turbulence at the interface may be found to be the rate-determining factors of mass transfer in a pure two-phase system, and, especially in the non-equilibrium state and under conditions of intensive transfer. (Author)

Minchenko, F. P.
HEAT EXCHANGE DURING BUBBLE BOILING
1 Dec 61 [16]p. 12 refs. FTD-TT-61-153.
Order from OTS or SLA $1.60 62-15176

Unedited rough draft trans. of Energomashinostroenie (USSR) 1960 [v. 6] no. 6, p. 17-21.

DESCRIPTORS: Water, Lithium compounds, Chlorides, Bromides, *Bubbles, *Boiling, *Heat exchangers, *Heat transfer.

Results are given of a study of the heat transfer to boiling water and solutions of Li salts, with large-volume equipment and a circulation loop. An analysis and the general dependence of their criteria are given; this dependence is compared with the familiar dimensionless formulas. (Author)

Morozov, G. E.
EXPERIMENTAL DETERMINATION OF THE EFFECTIVE COEFFICIENT OF HEAT CONDUCTIVITY AND DIFFUSION FOR BODIES WITH CHANNEL POROSITY, USING THE METHOD OF ELECTRICAL ANALOGY. 11 Dec 61 [7]p. 1 ref. FTD-TT-61-111.
Order from OTS or SLA $1.10 62-15404

Unedited rough draft trans. of Inzhenerno-Fizicheskii Zhurnal (USSR) 1961, v. 4, no. 2, p. 103-105.

DESCRIPTORS: *Heat transfer, *Thermal conductivity, Simulation, Electricity, *Analog system, Reactor moderators, Porosity, Neutrons, Diffusion.

Because of the similarity of thermal, diffusion, and electrical phenomena, it is proposed to substitute electrical measurements for the thermal and diffusion measurements. The feasibility of such a substitution is analyzed.

Mullokandov, R. N.
WARMTEGELEIDING DOOR CONTACT IN EEN LAAG BOLVORMIGE DEELTJES (Heat Conducting by Contact in a Layer of Spherical Particles) tr. by G. M. J. Fritschy. 6p. 2 refs. MTWL: 304. (text in Dutch).
Order from OTS or ETC $1.55 61-17958

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1947, v. 17, p. 1149-1152.

DESCRIPTORS: *Heat transfer, Particles.

Nikol'skii, G. P., Kazarnovskaya, L. I., and others
DE VORMINGSWARMTE VAN KALIUMOZONIDE EN DE ELECTRONENAFFINITEIT VAN HET OZONMOLECUUL (Heat of Formation of Potassium Ozonide and Electron Affinity of the Ozone Molecule) 8p. 10 refs. MTWL: 401. (text in Dutch).
Order from OTS or ETC $1.55 61-32002

Trans. of Akademiya Nauk SSSR. Doklady, 1950, v. 72, no. 4, p. 713-715.
A trans. in English is available from ATS $6.75 as ATS-21L29R [1958] 5p.

DESCRIPTORS: *Potassium compounds, *Ozonides, Heat of Formation, Thermodynamics.

Sheindlin, A. E.
EXPERIMENTAL INVESTIGATION OF SPECIFIC HEAT Cp OF WATER AND STEAM AT HIGH PARAMETERS. [1961] [16]p. (1 table omitted) 7 refs.
Order from OTS or SLA $1.60 62-10739

Trans. from Teploenergetika (USSR) 1954 [v. 1] Jan.

DESCRIPTORS: *Water, *Steam, Specific heat, Thermodynamics, Calorimeters, Heat transfer, Nuclear isobars.

In all, 240 experimental values of specific heat obtained on five isobars--300, 350, 400, 450, and 500 atm--in the temperature interval from 200 to 660 °C.

Sokdov, V. A.
FAZE-OVERGANGEN VAN DE TWEEDE SOORT EN DE VERGELIJKING VAN EHRENFEST (Phase Transitions of the Second Kind and the Ehrenfest Equation) tr. by J. H. van Santen. 7p. 8 refs. MTWL: 296. (text in Dutch).
Order from OTS or ETC $1.55 61-17970

Trans. of Akademiya Nauk SSSR. Doklady, 1949, v. 65, p. 883-886.

DESCRIPTORS: *Phase transitions, Thermodynamics, *Specific heat.

Stefanowski, Bohdan.
ON THE ACTIVITIES OF THE INSTITUTE OF THERMODYNAMICS. 16 Jan 62 [10]p. JPRS: 12005.
Order from OTS or SLA $1.10 62-19609

Partial trans. (some parts summarized) of Nauka Polska, 1961, v. 9, no. 1 (33) p. 123-128.

DESCRIPTORS: *Thermodynamics, *Heat transfer, Atmosphere, Contamination, *Combustion, *Refrigeration systems, Heat, Measurement.

Tilicheev, M. D. and Tatevskii, V. M.
THE CRITICAL CONSTANTS OF n-ALCANES. 10p. 7 refs. MTWL: 148.
Order from OTS or ETC $1.55 61-17870

Trans. of Neftyanoe Khozyaistvo (USSR) 1948, [v. 26] no. 12, p. 33-36.

DESCRIPTORS: *Hydrocarbons, *Thermodynamics, Boiling, Temperature, Pressure.

Vyrubov, D. N.
WARMTEOVERDRACHT EN VERDAMPING VAN DRUPPELS (Loss of Heat and Evaporation of Drops) 14p. 13 refs. MTWL: 156. (text in Dutch).
Order from OTS or ETC $1.85 61-17858

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1939, v. 9, p. 1923-1931.
A trans. in English is available from SLA as RT-1670.

DESCRIPTORS: *Drops, Heat transfer, *Evaporation.

Wave Propagation

Al'pert, Ya. L.
RADIOWAVE PROPAGATION IN THE IONOSPHERE. [1962] approx. 350p.
Order from CB $20.00

Trans. of mono. [Rasprostranenie Radiovoln i Ionosfera, Moscow, 1960, 480p.].

DESCRIPTORS: *Radio waves, Propagation, *Ionosphere

Brekhovskikh, L.
REFLECTIE VAN BOLVORMIGE GOLVEN TEGEN EEN VLAK GRENSVLAK TUSSEN TWEE MEDIA (Reflection of Spherical Waves on the Plane Separation of Two Media) tr. by J. H. van Santen. 24p. 18 refs. MTWL: 386. (text in Dutch).
Order from OTS or ETC $1.91 61-32024

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1948, v. 18, p. 455-472.

DESCRIPTORS: *Electromagnetic waves, *Sound transmission, *Reflection, Theory.

Brekhovskikh, L.
REFLECTIE VAN BOLVORMIGE GOLVEN TEGEN EEN WEINIG UITGESPROKEN GRENSVLAK (Reflection of Spherical Waves on "Weak" Separating Surfaces) tr. by J. H. van Santen. 16p. 14 refs. MTWL: 388, (text in Dutch).
Order from OTS or ETC $1.85 61-32026

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1948, v. 18, p. 473-482.

DESCRIPTORS: *Radio waves, *Sound, Reflection, Theory.

Gaponov, A. V. and Freidman, G. I.
THEORY OF ELECTROMAGNETIC SHOCK WAVES IN NONLINEAR MEDIA. [1962] 5p. 12 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Radiofizika (USSR) 1960, v. 3, no. 1, p. 79-88.
Another trans. is available from OTS $5.00 in 61-21270, JPRS-7377, 14 Feb 61, 375p.

DESCRIPTORS: *Electromagnetic waves, *Shock waves, Propagation, Theory, Electric fields, Magnetic fields, Intensity, Inductance, *Ferrites, Conductivity, Nonlinear systems, Wave analysis, Differential equations, Magnetic properties, Permeability.

Mash, D., Mayants, L., and Fabelinskii, I.
METINGEN VAN DE TEMPERATUURAFHANKELIJKHEID VAN DE DIELECTRISCHE CONSTANTE EN DE VERLIESHOEK VAN DIELECTRICA BIJ CENTIMETER GOLVEN (Measurements of the Temperature Dependence of the Permittivity and the Loss Angle of Dielectrics in the cm-wave Range). 11p. 2 refs. MTWL: 299. (text in Dutch).
Order from OTS or ETC $1.85 61-17973

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1949, v. 19, no. 10, p. 1192-1198.

DESCRIPTORS: *Dielectric properties, *Microwaves, Measurement, Temperature.

Medvedev, V. I.
METHOD OF RADIO INTERFERENCE MEASUREMENTS OF SMALL TIME INTERVALS USING FREQUENCY MULTIPLICATION, tr. by Astrid Werner. [1962] 4p. 14 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of Moscow U. Vestnik (USSR) 1959 [v. 14] no. 6, p. 112-119.

DESCRIPTORS: *Radio interference, Interference, *Time, Measurement, *Frequency multipliers, *Phase meters, Stability, Switching circuits, Radio signals, Signals, Transmission.

Vainshtein, L. A.
THEORIE DER SYMMETRISCHE GOLVEN IN EEN RONDE GOLFPIJP MET OPEN UITEINDE (Theory of Symmetrical Waves in a Circular Wave Guide with Open End) tr. by J. H. van Santen. 40p. 13 refs. MTWL: 389. (text in Dutch).
Order from OTS or ETC $2.63 61-32027

Trans. of #Zhurnal Tekhnicheskoi Fiziki (USSR) 1948, v. 18, p. 1543-1564.
A trans. in English is available from SLA as RT-1482

DESCRIPTORS: *Waveguide, Electromagnetic wave reflection, Transformers, Theory.

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

DIGEST OF TRANSLATED RUSSIAN LITERATURE. 17p. 121 refs.
Available in ARS Journal, v. 32, no. 3, $3.00

Trans. of abstracts from nine selected Russian periodicals.

DESCRIPTORS: *Translations, USSR, Abstracting, Automation, Remote control systems, Control systems, Measurement, Instrumentation, Physical chemistry, Optics, Absorption spectra, Astronomy, Physics, Communication systems, Electronic equipment.

INFORMATION ON BULGARIAN SCIENTISTS. 16 Nov 60 [7]p. 22 refs. JPRS: 6253.
Order from OTS or SLA $1.10 62-19458

Trans. of Bulgarski Knigopis, 1960, v. 64, p. 44-48.

DESCRIPTORS: Scientific research, Industrial research, *Professional personnel.

MEETING OF THE DEPARTMENTS OF THE ACADEMY OF SCIENCES OF THE UkSSR. 13 Nov 61 [13]p. JPRS: 11103.
Order from OTS or SLA $1.60 62-13542

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1961, no. 6, p. 699-707.

DESCRIPTORS: *Scientific organizations, *Conferences Sociology, Physics, Chemistry, Mathematics, Biology.

NEW MEMBERS OF THE BULGARIAN ACADEMY OF SCIENCES. 1 Nov 61 [15]p. JPRS: 10861.
Order from OTS or SLA $1.60 62-19511

Partial trans. (some sections summarized) of Bulgarska Akademiya na Naukite. Spisanie, 1961, v. 6, no. 1, p. 115-122.

DESCRIPTORS: *Scientific personnel, Scientific research.

NORWEGIAN PATENTS IN ENGLISH TRANSLATION, NOS. 99364-99425. 6 May 62, 62 nos.
Order from AC $1.85/each

DESCRIPTORS: *Patents, Inventions, *Norway, Calcium compounds, Oxides, Ammonium radicals, Nitrates, Solids, Organic materials, Natural gas, Gases Telephones, Radar equipment, Electrochemistry, Power supplies, Plugs (Electricity), Sliding contacts, Fuel elements, Metals, Abrasives, Hydrocarbons, Combustion, Condensation reactions, Oil burners, Brushes, Molding, Casting, Glass textiles, Beverages, Strainers, Loaders, Humidity, Ventilation fans, Slags, Liquid level control, Monitors, Clamps, Digital computers, Computers, Cutting tools, Pipes, Hose clamps Hydraulic valves, Gears, Iron, Steel, Cleaning, Oxalates, Valves, Foils, Cigarettes, Tires, Propelling charges, Projectiles, Recreation, Boreholes, Explosives, Cartridges, Shaped charges, Gypsum, Containers, Wire, Purification, Ions, Water, Cooling, Sodium compounds, Chlorides, Aluminum compounds, Niobium compounds, Tantalum compounds, Uranium, Grains (Metallurgy), Boilers, Heating plants, Machines, Belts, Storage tanks, Thermal insulation

NORWEGIAN PATENTS IN ENGLISH TRANSLATION, NOS. 99426-99504. 14 May 62, 79 nos.
Order from AC $1.85/each

DESCRIPTORS: *Patents, *Inventions, *Norway, Steel, Direction finding, Discharge tubes, Insulating materials, Electric machinery, Bolts, Electrodes, Pipes, Hydrogen compounds, Threads, Films, Paper, Furniture, Water heaters, Transparent panels, Cutting tools, Aluminum, Metals, Dosage, Soils, Machines, Fans, Cable grips, Clamps, Corrosion inhibition, Ejection seats, Vehicles, Projectiles, Rockets, Telephones, Current regulators, Cleaning, Penicillin, Roads, Storage batteries, Lighting systems, Image intensifier's (Electronics), Welding, Lubricants, Oil burners, Nets, Hydraulic brakes, Machine tools, Separation, Fishes, Markers, Wood, Strainers, Life rafts, Propeller blades, Hand grenades, Monitors, Nitrides, Automative industry, Wheel hubs.

POLISH SCIENCE, 1960 [VOL. 8] NO. 2: SELECTED TRANSLATIONS. 28 Mar 61 [38]p. 4 refs.
JPRS: 6985.
Order from OTS or SLA $3.60 62-19338

Trans. of Nauka Polska, 1960 [v. 8] no. 2, p. 107-114, 121-128, 153, 155-182.

DESCRIPTORS: *Science, Scientific research, Scientific organizations, *Agriculture, Soils, Fertilizers, *Microbiology, Plants, Nutrition, Microorganisms, *Scientific personnel, *Medical personnel, Personnel, Poland.

SCIENTIA, 1958, NO. 8: SELECTED TRANSLATIONS 29 Dec 61 [85]p. 7 refs. JPRS: 11796.
Order from OTS or SLA $8.10 62-15351

Trans. of K'o Hsüeh T'ung Pao (Chinese People's Republic) 1958, no. 8, p. 225-235 and 246-256.

DESCRIPTORS: *Laboratories, *Cellulose chemistry, Inorganic substances, Physical chemistry, Chemical analysis, Economics, Influenza viruses, *Quartz, Tungsten, Soils, *Forestry, *Diural variations, Heat transfer, Bubble chambers, Geography, Scientific organizations, Marine biology, Agriculture.

Contents:
Leap forward plan of the cellulose chemistry laboratory
Leap forward plan of the inorganic chemistry laboratory
Leap forward plan of the physical chemistry laboratory
Leap forward plan of the first group of the analytical chemistry laboratory
Personal leap forward plan, by Chu Jung-chao
Overtake the international advance level within six years
Complete four years' work in a single year
Overthrown obsolete rules, establish a new form of work organization
The inhibitory action of some elements on influenza virus IV, by Wang Shan-yuan
Some growth characteristics of the tungsten-bearing quartz vein in Ta Chi Shan and P'an Ku Shan, Kiangsi Province
Problems of soil moisture encountered in the study of sand-fixation and afforestation along the Chung Wei section of the Pao T'ou/Lanchow Railway in the T'eng Ko Li desert, by Li Ming-kang and others
Mean interdiurnal variations in the height of, and temperature at standard isobaric surface over China, by Yang Chien-ch'u and Sung Chien-hsun
Efficiency of the sieve plate in bubble heat transfer equipment, by Kuo I-ku
All-China scientific conference of paddy soil, by Chia Tsui-kung
Scientific committee established by Academia Sinica Institute of Marine Biology, by Hsieh P'an-kao
The Institute of Geography of Academia Sinica leaps forward, by Ma Hsiang-yung
Cooperation between Academia Sinica and Chinese Academy of Agricultural Sciences, by Shen Han-yung.

SCIENTIFIC RELATIONS WITH FOREIGN COUNTRIES. 15 Mar 62 [62]p. JPRS: 13008.
Order from OTS or SLA $1.60 62-23429

Trans. of Akademiya Nauk SSSR. Vestnik, 1961, v. 31 no. 12, p. 94-97 and 101-105.

DESCRIPTORS: *Conferences, *Symposia, *Molecular spectroscopy, *Turbulence, Biology, Electric filters, Minerals, Astronomy, Materials.

Contents:
European Congress on Molecular Spectroscopics (no. 5) by M. M. Sushchinskii
Colloquium and Symposium on the Problem of Turbulence, by A. M. Obukhov
General Assembly of the International Union of Biological Sciences (no. 14) by M. S. Gilyarov
Conference on the Theory of Linear Electrical Chains, by V. A. Taft
International Colloquium on the Enrichment of Nonmetallic Useful Materials, by V. G. Glembotskii and N. F. Olofinskii
At the International Astronomical Union, by A. A. Mikhailov.

SCIENTISTS AND SCIENTIFIC ORGANIZATIONS OF THE USSR. 16 Oct 61 [12]p. JPRS: 10602.
Order from OTS or SLA $1.60 62-13017

Trans. of Akademiya Nauk URSR, Kiev. Dopovidi, 1961, no. 3, p. 396-400.

DESCRIPTORS: *Scientific research, Social sciences, Chemistry, Geology, Geophysics, *Scientific personnel, Training, Education.

Contents:
Approval of plans for scientific research to be carried out at the institutions of the department of social sciences
Approval of a thematic plan for scientific research at institutions of the department of chemical and geological sciences
Establishment of the institute of geophysics within the

department of chemical and geological sciences
Fulfillment of the plan concerning admittance to graduate studentship
Training graduate students (aspirants).

WORK OF THE DEPARTMENT OF TECHNICAL SCIENCES OF THE HUNGARIAN ACADEMY OF SCIENCES. 11 Apr 61 [38]p. JPRS: 8064.
Order from OTS or SLA $3.60 62-19241

Trans. of Magyar Tudomanyos Akademia Muszaki Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 27, no. 1/2, p. 1-33.

DESCRIPTORS: Scientific organizations, *Scientific research, Hungary.

Contents:
Report of the work of the Department of Technical Sciences of the Hungarian Academy of Sciences, by Sandor Geleji
Supplementary reports and comments on the work of the Department of Technical Sciences.

Chong, Dal-gun.
RAPID DEVELOPMENT OF SCIENCE IN NORTH KOREA. 6 Oct 60 [5]p. JPRS: 5739.
Order from OTS or SLA $1.10 60-41514

Trans. from Nodong Sinmun (North Korea) 1960, no. 219, p. 3.

DESCRIPTORS: *Scientific research, *Industrial research, North Korea.

Hajos, Gyorgy.
REPORT OF THE ADMINISTRATIVE STAFF OF THE DEPARTMENT OF MATHEMATICS AND PHYSICS OF THE HUNGARIAN ACADEMY OF SCIENCES ON TEN YEARS OF ACHIEVEMENT AND FUTURE PROBLEMS (Az Osztalyvezetoseg Beszamoloja). 28 Apr 61 [21]p. JPRS: 7883.
Order from OTS or SLA $2.60 62-19196

Trans. of Magyar Tudomanyos Akademia Matematikai es Fizikai Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 10, no. 4, p. 407-420.

DESCRIPTORS: Mathematics, Physics, Astronomy, *Scientific research, *Hungary.

Jarnuszkiewicz, Halina.
SCIENTIFIC RESEARCH PLANS OF THE INSTITUTES OF THE POLISH ACADEMY OF SCIENCES (PAN). 31 Jan 62 [30]p. JPRS: 12244.
Order from OTS or SLA $2.60 62-19556

Partial trans. (some parts summarized) of Nauka Polska, 1961 [v. 9] no. 1(33) p. 229-248.

DESCRIPTORS: *Scientific research, Research program administration, *Poland.

Matsumoto, Hiroichi.
TECHNOLOGICAL INNOVATION IN COMMUNIST CHINA (Chugoku no Gijutsu Kakusin). 23 Feb 61 [18]p. JPRS: 7720.
Order from OTS or SLA $1.60 62-19428

Trans. of EKAFE Tsushin (Japan) 1960, no. 248, p. 25-40.

DESCRIPTORS: *Industrial research, Industrial plants Technological intelligence, Engineering, Automation, China.

The origins are traced of movement for technological innovation and reform that is underway on the Chinese mainland. Accomplishments in the fields of heavy industry, mining, and agriculture are discussed. Patterns of technological innovation in Communist China are compared with those in USSR, the capitalist nations, and Japan. It is concluded, on the basis of the available source material, that there are 2 components of the movement. One part is aimed at the adoption of the latest techniques in energy sources, electronic engineering, synthetic chemical engineering, and automation. The other part is aimed at the promotion of creativity and invention. The greater emphasis is being placed on the development of creativity and invention.

Nowacki, Witold.
ON THE FIVE-YEAR PLAN FOR SCIENTIFIC RESEARCH (Nad Planem 5-Letnim Badan Naukowych). 24 Apr 61 [10]p. JPRS: 9095.
Order from OTS or SLA $1.10 62-19323

Trans. of Nowe Drogi (Poland) 1961, v. 15, no. 2, p. 102-107.

DESCRIPTORS: *Scientific research, Research program administration, *Poland, Economics.

Petrushin, Yu.
THE FUTURE LIES WITH CYBERNETICS. 2 Feb 62 [5]p. JPRS: 12312.
Order from OTS or SLA $1.10 62-15781

Trans. from Zarya Vostoka (USSR) 1961, 2 Dec, p. 2.

DESCRIPTORS: *Cybernetics, Scientific research, Scientific personnel, *Mathematics.

Szemeredi, Tibor.
A NEW STAGE OF SCIENTIFIC RELATIONS BETWEEN HUNGARY AND EAST GERMANY. 26 Feb 62 [6]p. JPRS: 12683.
Order from OTS or SLA $1.10 62-19775

Trans. of Magyar Tudomany (Hungary) 1960, v. 6[68] no. 6, p. 380ff.

DESCRIPTORS: *Scientific research, *Hungary, *East Germany.

Szerenyi, Sandor.
ABOUT SOME CURRENT PROBLEMS OF OUR SCIENTIFIC LIFE. 9 Jan 62 [18]p. JPRS: 11864.
Order from OTS or SLA $1.60 62-19600

Trans. of Magyar Tudomany (Hungary) 1961, v. [6]68 no. 7/8, p. 393-402.

DESCRIPTORS: *Scientific research, Research program administration.

Tokes, Otto.
THE ORGANIZATIONAL TASKS OF THE HUNGARIAN ACADEMY OF SCIENCES AFTER ITS 1961 GENERAL MEETING. 2 Feb 62 [21]p. JPRS: 12264.
Order from OTS or SLA $2.60 62-19657

Trans. of Magyar Tudomany (Hungary) 1961, v. [6](68) no. 9, p. 537-544.

DESCRIPTORS: Scientific organizations, *Scientific research, Research program administration, *Hungary.

Topchiev, A.
SOME FUTURE PROBLEMS IN SCIENTIFIC DEVELOPMENT. 19 Feb 62, 16p. JPRS: 12595.
Order from OTS $0.50 62-11172

Trans. of Nauchno-Tekhnicheskie [Obshchestva SSSR] 1961, v. 3, no. 6, p. 3-7.

DESCRIPTORS: *Scientific research, Satellite vehicle research, Cosmic rays, Space flight, *Energy, Sources, Transformations, *Electronics, Paramagnetic amplifiers, Amplifiers, Electronic equipment, Information theory, *Polymers, Synthesis, Chemistry

Activities that will engage the efforts of Soviet scientists include: (1) the study of the radiation belts around the earth, (2) the development of new sources of energy, (3) the increase in the effectiveness of transforming energy, (4) developments in electronics, including the creation of new paramagnetic amplifiers and advances in the science of information and communication, and (5) researches in chemical mechanics and mechano-chemistry, for furthering the synthesis of polymers with a given complex of properties.

Communication Theory

Bobrov, N. P.
THE TRANSMISSION OF DISCRETE SIGNALS BY MEANS OF PHASE-DIFFERENCE KEYING. [1961] [8]p. 4 refs. [DSIR LLU] M. 2800.
Order from OTS or SLA $1.10 61-23244

Trans. of #Elektrosvyaz' (USSR) 1960 [v. 14] no. 6, p. 3-9.

DESCRIPTORS: *Telegraph signals, Transmission, Phase modulation, *Keying, *Radio, Phase shifters, *Telegraph transmitters.

Methods are discussed for transmitting discrete signals by means of phase-difference keying of the carrier, and the principles are described for constructing a phase-difference modulation transmitting system. (Author)

Bognar, Geza.
RESULTS OF HUNGARIAN RESEARCH ON WIDE-BAND MICROWAVE RADIO CONNECTIONS (Szelessavu Mikrohullamu Radioosszekotteteset Hazai Kutatasanak Eredmenyei). 21 Apr 61 [34]p. JPRS: 9081.
Order from OTS or SLA $3.60 62-19234

Trans. of Magyar Tudomanyos Akademia Muszaki Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 26, no. 1/4, p. 9-23.

DESCRIPTORS: Microwaves, *Microwave networks, Broadband, Coaxial cables, Transmission lines, *Radio communication systems, *Telephone communication systems, *Television transmitters, Radio-frequency, Voice communication systems, Communication systems, Specifications, Hungary.

Hypothetic reference networks are worked out for coaxial cable systems, for wide-band radio-telephone connections, and for long-distance TV transmission. Preliminary system specifications are given for a 3 RF channel system to be developed by the Research Institute for Telecommunications.

Izsak, Miklos.
SCIENTIFIC ASSOCIATION FOR TELECOMMUNICATIONS ENGINEERING IN HUNGARY, REPORT OF THE SECRETARY (Megnyito). 21 Apr 61 [7]p. JPRS: 9075.
Order from OTS or SLA $1.10 62-19232

Trans. of Magyar Tudomanyos Akademia Muszaki Tudomanyok Osztalyanak Kozlemenyei (Hungary) 1960, v. 26, no. 1/4, p. 5-7.

DESCRIPTORS: Conferences, *Communication systems, Telephone communication systems, Engineering, *Hungary.

Mikhailov, A.
REPLY TO AN ENEMY. Foreign Developments in Machine Translation and Information Processing no. 33. 14 Sep 61, 4p. JPRS: 8865.
Order from OTS $0.60 61-31604

Trans. from Ekonomicheskaya Gazeta (USSR) 1961, 20 June, p. 4.

DESCRIPTORS: *Documentation, Science, Information theory, Scientific organizations, Machine translation.

Inaccuracies are pointed out in a previous criticism by Klaus Schaurot (in the Austrian newspaper Heute) of the scientific and technical information services of the All-Union Institute of Scientific-Technical Information of the Academy of Sciences of the USSR.

Pirogov, A. A.
A DEVICE FOR AUTOMATIC DETERMINATION OF THE FUNDAMENTAL TONE FREQUENCY. 29 Nov 61 [5]p. FTD-TT-61-206; AD-268 069.
Order from OTS or SLA $1.10 62-15169

Unedited rough draft trans. #Byulleten' Izobretenii (USSR) 1960, no. 13, p. 38-39 (Russian patent 129739)

DESCRIPTORS: *Speech representation, Speech, Coding, Instrumentation, Automatic, Correlation techniques, Modulators, Delay lines, Electronic circuits, Commutators.

This device for automatic determination of the fundamental tone frequency of complex periodic oscillations for compression of the speech spectrum, using a delay line, has the following special feature: in order to accurately determine the maximum correlation function, the device uses balanced modulators whose first inputs are connected, in parallel with the delay line, to the input signal source, and the second inputs are connected to the delay line taps; the outputs of the balanced modulators are connected, across accumulators (filters) and a commutator, to the output device, which in this case may be a binary counter or a trigger. (Author)

Szabo, Zoltan.
CYBERNETICS AND LINGUISTICS. 26 Apr 61 [13]p. JPRS: 4567.
Order from OTS or SLA $1.60 62-19409

Trans. of Korunk (Rumania) 1961, v. 20, no. 1, p. 39-49.

DESCRIPTORS: *Cybernetics, *Language, Information theory, Communication systems.

Discussions are presented on the way information theory conceptualizes human language, the possibility of rapprochement between information theory and stylistics, and mathematical linguistics and language statistics. The elements of verse are shown to fulfill a concealed, highly effective role in promoting communication, which is not easy to pin down or analyze. Stylistics has gained a new angle of study from information theory, that of entropy. Conversely, information theory needs the stylistic approach as intrinsically characteristic of language, in contradistinction to all other symbol systems and other methods of communicating information.

Vasilescu, Iordan I.
COMBATTING NOISE IN ROOMS WITH TELECOMMUNICATIONS EQUIPMENT. 14 Aug 61 [16]p. 5 refs. JPRS: 8733.
Order from OTS or SLA $1.60 62-23264

Trans. of Telecomunicatii (Rumania) 1960, v. 4, no. 6, p. 261-267.

DESCRIPTORS: *Communication equipment, Telephone communication systems, Telegraph systems, *Acoustics, Noise, Reduction.

In addition to the installation of sound-absorbent materials there are several measures to be taken that will cut down noise even further, so that it will finally be below the established norm. These supplementary measures are: (1) uniform distribution of equipment over the entire surface of each room so as to avoid concentrations of machines in their functioning at peak hours in regard to directions; (2) shift of some machines from their present rooms to other specially separated ones, as for example tape punches, etc.; (3) noise reduction directly at the source by phonically insulated covers, felt or equipment, etc; and (4) prevention of noise transmission by the use of furniture. Partial use of these measures or mere installation of sound-absorbent equipment will only partially reduce the noise and is bound to compromise the noise-prevention program. Adoption of these supplementary measures plus installation of sound-absorbent material will reduce the noise in the rooms, enabling personnel to work with increased productivity and to be used to the maximum in production, and eliminating a whole series of occupational diseases. (Author)

SOCIAL SCIENCES

Bunak, V. V.
TEXTBOOK ON ANTHROPOLOGY IN A SYSTEMATIC PRESENTATION BASED ON RUDOLPH MARTIN'S WORK. Review of book "Lehrbuch der Anthropologie in Systematischer Darstellung Begründet von Rudolf Martin", by R. Martin and K. Saller. 23 Oct 61 [9]p. JPRS: 10654.
Order from OTS or SLA $1.10 62-13264

Trans. of Voprosy Antropologii (USSR) 1960, no. 3, p. 155-158.
DESCRIPTORS: *Anthropology, Textbooks.

Gremyatskii, M. A.
FORTY YEARS OF SOVIET ANTHROPOLOGY (Sorok Let Sovetskoi Anthropologii). [1961] 20p.
Order from OTS or SLA $1.60 62-15092

Trans. of Arkhiv Anatomii, Gistologii i Embriologii (USSR) 1957, v. 34, no. 5, p. 8-18.
DESCRIPTORS: *Anthropology, Man, Anatomy.

Documentation

REFERENCE PUBLICATIONS OF THE LENIN STATE LIBRARY OF THE U.S.S.R. (Informatsionnye Izdaniya Gosudarstvennoi Biblioteki SSSR imeni V. I. Lenina) tr. by B. L. Pearce. [1961] [8]p. (foreign text included). [DSIR NLL] M 606.
Order from OTS or SLA $1.10 59-22642

Unedited trans. of Bibliotekar' (USSR) 1958, no. 10, p. 60-61.

DESCRIPTORS: *Libraries, Bibliography, Documentation.

Basyas, L. Ya.
MEDICAL LIBRARIES IN THE USSR, tr. by Scott Adams. 10 Feb 58, 9p. 6 refs.
Order from OTS or SLA $1.10 62-15620

Trans. of mono. 40 Years of Soviet Public Health, Moscow, 1957, p. 505-511.
DESCRIPTORS: *Libraries, *Medicine.

BOOK REVIEWS

The following book reviews can be ordered by number from OTS or SLA for $1.10.each. Each review includes, in addition to the material shown, a detailed statement of the coverage of the book and detailed table of contents.

BR-SOV/5644
UTILIZATION OF ULTRASONICS FOR THE INVESTIGATION OF MATERIALS. NO. 10. (Primeneniye ul'traakustiki k issledovaniyu veshchestva. vyp. 10.) Moscow, Izd-vo MOPI, 1960. 321p. 1000 copies printed.

BR-GER/5655
Koch, Siegfried
RADIOACTIVE RADIATION SOURCES IN ENGINEERING. (Radioaktive Strahlenquellen in der Technik) Leipzig, VEB Deutscher Verlag für Grundstoffindustrie, 1960. 118p. (Series: Kleine Bibliothek der Kerntechnik) No. of copies printed not given.

BR-CZECH/5660
Nejepsa, A. and Miloslav Vlk.
STAMPING AND FORGING IN THE ChSSR and USSR; THE PRESENT STATE AND PROSPECTS FOR DEVELOPMENT. (Lisovani a kovani v CSSR a SSSR; soucasny stav a perspektivy rozvoje) Prague, SNTL, 1961. 337p. 1150 copies printed.

BR-CZECH/5662
Milbauer, Milos and Miroslav Perla
PHOTOELASTICITY AND EXAMPLES OF ITS APPLICATION. (Fotoelasticimetrie a priklady jejiko pouziti) Prague, Nakl. CSAV, 1961. 504p. 1300 copies printed.

BR-SOV/5667
Saybel', A. G.
PRINCIPLES OF RADAR. (Osnovy radiolokatsii) Moscow, Izd-vo "Sovetskoye radio," 1961. 384p. Errata slip inserted. 25,000 copies printed.

BR-SOV/5688
Polovnikov, Viktor Viktorovich, Pavel Fedorovich Filippov, Vyacheslav Aleksandrovich Bodazhkov, and Genrikh Gavrilovich Semibratov
ROLLING OF SPUR GEARS. (Izgotovleniye tsilindricheskikh zubchatykh koles prokatkoy) Moscow, Mashgiz, 1961. 187p. Errata slip inserted. 8000 copies printed.

BR-SOV/5691
Dubinskiy, Abram Markovich
CALCULATION OF THE LOAD-CARRYING CAPACITY OF REINFORCED-CONCRETE PLATES. (Raschet nesushchey sposobnosti zhelezobetonnykh plit) Kiyev, Gosstroyizdat UkrSSR, 1961. 180p. 6,000 copies printed.

BR-SOV/5699
Yudin, D. B., and Ye. G. Gol'shteyn
PROBLEMS AND METHODS OF LINEAR PROGRAMMING (Zadachi i metody lineynogo programmirovaniya) Moscow, Izd-vo "Sovetskoye radio," 1961. 490p. Errata slip inserted. 10,000 copies printed.

BR-SOV/5709
Veselov, Vladimir Aleksandrovich
EQUIPMENT FOR THE MANUFACTURE OF PLASTIC ARTICLES; THERMAL CALCULATIONS. (Oborudovaniye dlya pererabotki plasticheskikh mass v izdeliya; teplovyye raschety) Moscow, Mashgiz, 1961. 211p. Errata slip inserted. 10,000 copies printed.

BR-SOV/5710
Kuliyev, Ali Musa
LUBRICANT ADDITIVES. (Prisadki k smazochnym maslam) Baku, Azerneftneshr, 1960. 321p. Errata slip inserted. 1000 copies printed.

BR-SOV/5719
Pinsker, Mark Semenovich
INFORMATION AND INFORMATION STABILITY OF RANDOM MAGNITUDES AND PROCESSES. (Informatsiya i informatsionnaya ustoychivost' sluchaynykh velichin i protsessov) Moscow, Izd-vo AN SSSR, 1960. 201p. (Series: Akademiya nauk SSSR. Laboratoriya sistem perdachi informatsii. Problemy peredachi informatsii, vyp. 7) Errata slip inserted. 3000 copies printed.

BR-SOV/5720
Shklover, Aron Mikhaylovich
HEAT TRANSFER DURING RECURRENT THERMAL REACTIONS. (Teploperedacha pri periodicheskikh teplovykh vozdeystviyakh) 2nd ed., rev. and enl. Moscow, Gosenergoizdat, 1961. 159p. Errata slip inserted. 7000 copies printed.

BR-SOV/5737
Samsonov, Grigoriy Valentinovich, and Lyudmila Leonidovna Vereykina
PHOSPHIDES. (Fosfidy) Kiyev, Izd-vo AN UkrSSR, 1961. 126p. 2500 copies printed.

BR-SOV/5739
Nikolayev, Georgiy Aleksandrovich,
PRESENT STATE OF WELDING TECHNOLOGY (Sovremennoye sostoyaniye svarochnoy tekhniki) [Moscow] Mashgiz, 1961. 6000 copies printed.

BR-SOV/5758
Samsonov, Grigoriy Valentinovich, and Yuriy Borisovich Paderno
BORIDES OF RARE-EARTH METALS. (Boridy redkozemel'nykh metallov) Kiyev, Izd-vo AN UkrsSR, 1961. 92p. 1500 copies printed.

BR-SOV/5760
Korsakov, Vladimir Sergeyevich
ACCURACY IN MACHINING. (Tochnost' mekhanicheskoy obrabotki) Moscow, Mashgiz, 1961. 378p. Errata slip inserted. 10,000 copies printed.

BR-SOV/5764
FUEL FOR ENGINES. (Toplivo dlya dvigateley) Official ed. Moscow. Gos. izd-vo standartov, 1960. 78p. (Series: SSSR. Gosudarstvennyye standarty) 8000 copies printed.

BR-SOV/5766
Kogan-Vol'man, Georgiy Izraylevich
FLEXIBLE-SHAFT DRIVES; A HANDBOOK. (Peredachi s gibkimi provolochnymi valami: spravochnik) Moscow, Mashgiz, 1961. 232p. Errata slip inserted. 8000 copies printed.

BR-SOV/5767
Chestnov, Aleksandr Leonidovich
PROBLEMS IN THE FINISHING OF METAL SURFACES. (Voprosy otdelochnoy obrabotki metallov) Moscow, Izd-vo AN SSSR, 1961. 110p. Errata printed on inside of back cover. 3500 copies printed.

BR-SOV/5773
Matevosyan, Rafael' Rubenovich
STABILITY OF COMPOUND FRAMED STRUCTURES; QUALITATIVE THEORY. (Ustoychivost' slozhnykh sterzhnevykh sistem; kachestvennaya teoriya) Moscow, Gosstroyizdat, 1961. 251p. (Series: Akademiya stroitel'stva i arkhitektury SSSR. Institut stroitel'nykh konstruktsiy. Trudy, vyp. 3). Errata slip inserted. 4000 copies printed.

BR-SOV/5775
Lavrinovich, Ye. V., and O. A. Savinov
MAKING FERROCONCRETE PRECASTINGS BY VIBROTAMPING. (Izgotovleniye zhelezobetonnykh elementov vibroshtampovaniyem) Leningrad, Gosstroyizdat, 1961. 139p. 5500 copies printed.

BR-SOV/5778
Mikheyev, N. V., and A. M. Lepskiy
UNIVERSAL RESETTABLE FIXTURES. (Universal'nyye perenalazhivayemyye prisposobleniya) Moscow, Oborongiz, 1961. 51p. Errata slip inserted. 7570 copies printed.

BR-SOV/5789
HOT WORKING OF METALS; TRANSACTIONS OF THE SCIENTIFIC TECHNOLOGICAL CONFERENCE ON THE DEVELOPMENT OF THE PRODUCTIVE FORCES OF THE KIYEV ECONOMIC REGION. NO. 2. (Goryachaya obrabotka metallov; trudy konferentsii. vyp. 2) Kiyev, Izdo-vo AN UkrSSR, 1960. 142p. 1000 copies printed.

BR-SOV/5790
Zakharenko, Semen Yefremovich and others.
PISTON COMPRESSORS. (Porshnevyye kompressory) Moscow, Mashgiz, 1961. 454p. Errata slip inserted. 11,000 copies printed.

BR-SOV/5791
Paton, Yevgeniy Oskarovich
SELECTED WORKS IN THREE VOLUMES. V. 2: WELDMENTS. (Izbrannyye trudy v trekh tomakh. t. 2: Svarnyye konstruktsii) Kiyev, Izd-vo AN UkrSSR, 1961. 418p. 2000 copies printed.

TRANSLATIONS IN PROCESS

AUTOMATION, 1961, NO. 5.
Avtomatyka (USSR) 1961, no. 5, p. 3-93.

PRIZES AWARDED BY THE SUPREME SOVIET USSR.
Verkhovnyi Sovet. Vedomosti (USSR) 1961, v. 24, no. 39(1074) p. 920-1075.

TULAREMIA, CHAPS. 4, 6, 9-11, and BIBLIOGRAPHY.
Mono. Tulyaremiya, 1960, p. 96-135, 207-241, 305-457.

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